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UNIVERSITY OF MICHIGAN

Homoeopathic Medical College

THIRTY-SECOND
ANNUAL ANNOUNCEMENT
1906-1907

Ann Arbor
PUBLISHED BY THE UNIVERSITY
1906

THIRTY-SECOND

ANNUAL ANNOUNCEMENT

OF THE

Homœopathic Medical College

OF THE

UNIVERSITY OF MICHIGAN

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1906

JANUARY

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DECEMBER

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CALENDAR

OF THE

HOMŒOPATHIC MEDICAL COLLEGE

1906-1907

1906.

Sept. 24. *Enrollment of Students in the Homœopathic Department.*

Sept. 25. FIRST SEMESTER BEGINS IN ALL DEPARTMENTS OF THE UNIVERSITY.

Nov. —. Thanksgiving Recess of four days, begins in all Departments of the University.

Dec. 21. Holiday Vacation begins in all Departments.

1907.

Jan. 8. Exercises resumed.

Feb. 8. FIRST SEMESTER CLOSES.

Feb. 11. SECOND SEMESTER BEGINS.

April 12. (Evening) Recess begins. ending April 22 (evening).

June 20. COMMENCEMENT.

INSTRUCTION IS GIVEN THE STUDENTS

OF THE

HOMŒOPATHIC MEDICAL COLLEGE

BY THE FOLLOWING

Members of the University Faculties

WILBERT B. HINSDALE, A.M., M.D., Professor of Theory and Practice of Medicine and Clinical Medicine.

ROYAL S. COPELAND, A.M., M.D., Professor of Ophthalmology, Otology, and Laryngology.

WILLIS A. DEWEY, M.D., Professor of Materia Medica and Therapeutics and Clinical Professor of Nervous Diseases.

CLAUDIUS B. KINYON, M.D., Professor of Gynæcology and Obstetrics.

DEAN T. SMITH, B.Sc., M.D., Professor of Surgery and Clinical Surgery.

OSCAR R. LONG, M.D., Lecturer on Mental Diseases.

WILLIAM A. POLGLASE, M.D., Lecturer on Nervous Diseases.

ROLLIN H. STEVENS, M.D., Lecturer on Dermatology.

CLAUDE A. BURRETT, PH.B., M.D., Director of Pathogenetic and Pathological Laboratories.

VICTOR C. VAUGHAN, PH.D., M.D., Professor of Hygiene and Physiological Chemistry.

OTIS C. JOHNSON, A.M., PH.C., Professor of Analytical Chemistry.

WARREN P. LOMBARD, A.B., M.D., Professor of Physiology.

J. PLAYFAIR McMURRICH, A.M., PH.D., Professor of Anatomy.

HARRY B. HUTCHINS, LL.D., Professor of Medical Jurisprudence.

FREDERICK G. NOVY, Sc.D., M.D., Professor of Bacteriology.
ALFRED S. WARTHIN, Ph.D., M.D., Professor of Pathology.
GOTTHELF C. HUBER, M.D., Junior Professor of Anatomy.
JOHN O. REED, Ph.D., Junior Professor of Physics.
MOSES GOMBERG, Sc.D., Assistant Professor of Organic Chemistry.
SIMON M. YUTZY, M.D., Instructor in Anatomy.
LEON J. GIBSON, M.D., Assistant to the Professor of Ophthalmology, Otology, and Laryngology.
HARLEN MacMULLEN, M.D., House Surgeon.
BERTHA ANNE DAVIS, M.D., House Surgeon.
MYRTA WOODSON, In Charge of Training School for Nurses.
RUSSEL E. ATCHISON, M.D., Superintendent of Hospital.

Officers of the Faculty

JAMES B. ANGELL, LL.D., President.
WILBERT B. HINSDALE, A.M., M.D., Dean.
ROYAL S. COPELAND, A.M., M.D., Secretary.

Homœopathic Medical College

OF THE

UNIVERSITY OF MICHIGAN

It is a yearly custom of medical colleges to prepare announcements, setting forth their advantages, privileges, and courses of study.

In enumerating the special features of this Homœopathic Medical College the first point of advantage noticed is that it is a department of a great University.

The University of Michigan

The University of Michigan is the largest State University in the United States, and, with a single exception, the most largely attended institution of learning in America. Last year its student body numbered 4,591 persons, representing every state in the Union and almost every foreign country.

The University of Michigan is a part of the public educational system of the state. In accordance with the law, the University aims to complete and crown the work that is begun in the public schools, by furnishing ample facilities for liberal education in literature, science, and the arts, and for thorough professional study of medicine, engineering, pharmacy, law, and dentistry.

Through the aid that has been received from the United States and from the state it is enabled to offer privileges, with only moderate charges, to all persons of either sex, who are qualified for admission. While Michigan has endowed the University primarily for the higher education of her own sons and daughters, it must be understood that she also opens the doors of the institution to all students, wherever their homes. It is in this broad, generous, and hospitable spirit that the University has been founded, and that it endeavors to do its work.

To a student selecting a place for the study of medicine, the advantages of residence in a university city must be apparent. Contact with university life and association with students in other lines of thought are in themselves educational. Acquaintances and friendships are formed which will prove of lifetime value and pleasure. Through friends made in college, many a young doctor has been lead to a favorable location for the practice of his profes-

sion. Naturally, most of the associates and friends of the physician's life will be outside his own profession. The culture acquired by a four years' residence in the University atmosphere will widen the influence and usefulness of the physician who takes his degree from this Homœopathic Medical College.

LABORATORY METHODS

One of the great advantages offered by this college is that the fundamentals of medicine are taught by specialists. During the past few years the teaching of medicine has changed radically. The medical college of twenty years ago consisted mainly of a hospital, with what at this time would be regarded as a very indifferent equipment, and a dissecting room. While ample hospital facilities with all the various equipments that skill and ingenuity are devising, and the study of the grosser parts of the anatomy are essential to a medical and surgical training, the laboratory in its modern development has shown the medical man avenues of entrance into the innermost recesses of life.

The diagnostitian is no longer checked by the cutaneous covering of the body. The microscope, test tube, fluoroscope, spectroscope, ophthalmoscope, stethoscope, and other modern or improved appliances make it possible to interpret the hertofore hidden mysteries and penetrate somewhat the inner parts of the human body. No longer obliged to draw all his conclusions from external appearances, the trained physician really looks into the body of his patient, examines his tissues, tests his secretions and excretions, studies his blood and fibre, and learns how the very cells are carrying on the vital processes.

It is universally acknowledged that the laboratory courses here, demanding 1,700 hours of actual undergraduate work, give this college an unrivalled standing in the

professional world. The knowledge and training gained in this way make it possible for the Ann Arbor graduate to "look into the patient" and to study him as a graduate of a purely clinical school cannot hope to do.

THE NEW LABORATORY BUILDING

A new building, consisting of high basement and three stories, thoroughly modern in appointment and equipment, was constructed two years ago for the accommodation of the departments of anatomy, histology, pathology, physiological chemistry, bacteriology and hygiene. In this building all students of the University who are pursuing medical studies receive their instruction in those branches requiring technical laboratory work.

THE LABORATORIES

The laboratories are so extensive and numerous that it will not be out of place, perhaps, to devote considerable space to their description.

ANATOMICAL LABORATORY

The laboratory of Anatomy is situated on the third floor of the new laboratory building, and contains four well-lighted and well-ventilated dissecting rooms. One of these rooms is for men, another for women. The other two rooms, which are smaller, are for special work. There is also a study room for the convenience of students and a large room is set apart for the study of the anatomy of the central nervous system.

The anatomical law of the state furnishes, without embarrassment, an ample supply of material for the purpose of studying practical anatomy. During his course, each student is obliged to dissect thoroughly and care-

fully, under the supervision of competent demonstrators, every part of the body.

The Professor of Surgery supervises a course in operative surgery which all students, who have completed the requirements of descriptive and practical anatomy, are required to take.

CHEMICAL LABORATORIES

There is a separate large building containing about 38,000 square feet of floor space, situated in the center of the campus, devoted entirely to chemistry. In this building all the instruction in chemistry is given, except the course in physiological chemistry, which has been referred to in another connection. Among other provisions, the laboratories are arranged for classes in general, analytical, organic and physical chemistry. The School of Pharmacy is also located in this building. In each subject the student advances by progressive courses under the direction of an instructor. If one desires to specialize in any branch of chemistry there is furnished special opportunity for independent investigation.

The laboratory for general chemistry is separately organized. Courses in elementary inorganic chemistry, as well as physical chemistry and the advanced branches of the science are offered; research work, both in inorganic and in organic general chemistry, is also arranged for in a separate room. Modern apparatus is on hand for all the varieties of work that are liable to be undertaken, and a well-equipped balance is provided.

The laboratories of analytical chemistry, organic chemistry and chemical technology are carried on together. There are separate work-rooms for qualitative analysis, quantitative analysis and for optical work. The building contains several lecture rooms, recitation rooms and a museum with collections for instruction in all branches of chemical science.

The chemical laboratories are open throughout the college year to all students of the University, and are regularly used by all departments except the Department of Law. They are also open to any person who wishes to pursue special studies therein, providing he complies with the conditions for admission to that department of the University to which the desired special studies properly belong.

Four hundred students are engaged in these laboratories at the same time, each at a table provided for one worker. During the year, from 600 to 800 students complete from one to four courses of study each in the various branches of chemistry. The students engage in chemical work as it is needful for their different purposes—the pursuit of science, or the preparation for teaching, for the several professions applying chemistry, and for the various chemical arts and industries.

The chemical library contains complete sets of all the most important chemical journals of present and former times, as well as the standard manuals, dictionaries, and encyclopedias. It thoroughly provides for all kinds of chemical work.

PHYSIOLOGICAL LABORATORY

The apartments provided for the Physiological Laboratory offer excellent facilities for class instruction and original investigation. A large and well-lighted room is appropriated chiefly to the use of undergraduate students who perform under the direction of instructors the fundamental physiological experiments, as far as possible the experiments being made on men.

Small rooms are devoted to advanced work and original investigation. Conveniently situated are an apparatus room, a dark chamber for optical experiments, and a large workshop containing machinists' and carpenters' appliances. The instrumental equipment of this lab-

oratory is good, and it contains all of the more essential instruments used in physiological demonstrations and research.

Several courses are given in the physiological laboratory, including lectures, recitations and demonstrations.

Lectures upon *animal physiology* are given five days a week the first semester and three days a week the second semester. They include a systematic review of the field of animal physiology, the physiological phenomena observed upon men being given especial emphasis. From time to time recitations are substituted for lectures. Such demonstrations as can be given profitably to a large class of students are made.

A laboratory course is open to all students who have made the required previous preparation. The course is given five afternoons a week, from 1:30 to 4:40, during nine weeks. The first section meets during the last nine weeks of the first semester, the second and third sections meet in the second semester. The object of the course is not only to familiarize the student with the ordinary methods employed in physiological work, so that he will be able to read more intelligently, but to cultivate a capacity for independent observation, and to supply that intimate knowledge of physiological processes which is to be obtained only by individual work. Inasmuch as this course is intended primarily for medical students, the experiments are made on the vertebrates, and, when the character of the experiment permits, on man, the students working in pairs, and alternately serving as subjects and experimenters. The experiments deal with the physiology of nerve and muscle; the physical problems of respiration and circulation; the nervous regulation of the heart, blood vessels, and respiratory mechanisms; reflex processes and their modification by re-enforcing and inhibitory influences; and some of the simpler phenomena of sensation. Each student is expected to perform indi-

vidually each experiment, report the results obtained, either in the form of graphic records or tabulated observations, and accompany these with such notes as will make it clear that the purpose of the experiments and the phenomena observed are clearly understood. From time to time the section meets as a whole to discuss the results of the experiments which have been made, and at such times reports are given by its members upon special topics related to the work.

A course in research is open to such students as can show that they are prepared to carry on independently physiological investigations. The student is encouraged to develop originality in attacking physiological and biological problems. He is also expected to acquaint himself with the literature of the subject studied.

HISTOLOGICAL AND EMBRYOLOGICAL LABORATORY

The histological laboratory is on the second floor of the new laboratory building. It is well supplied with microscopes and accessories, microtomes, imbedding apparatus and all the other necessary appliances used in histological and embryological work. During his term of instruction in the laboratory each student is furnished with microscopical reagents, a microscope, and a table for his own use, so that the practical work is carried out by each individual for himself. In the elementary course in histology an effort is made to teach the student the use of the microscope, the methods of teasing, the methods of mounting paraffine and celloidin sections, and the use of a number of the more commonly employed stains.

During his stay in the laboratory the student makes about one hundred and fifty preparations, and he is required to sketch them all as he makes them. These preparations are so arranged as to furnish him with specimens of typical cells and cell devision, and all the elementary tissues, of the various glands and organs of the body,

of the epidermis, of the central and peripheral nervous system, and of the sensory end-organs and the special senses.

In the course on microscopical technique, which is open only to those who have completed the elementary work, the student is instructed in the various methods of hardening, staining, and counting red and white blood cells, and the use of the microscope in forensic medicine.

An optional laboratory course in the embryology of the salamander, the chick, and the mammalia is offered, which is open to students who have completed the elementary work in histology and a course in microscopical technique, and have attended lectures in embryology. There is also an optional laboratory course in the microscopic anatomy of the brain and the special senses.

PATHOLOGICAL LABORATORY

The facilities of the pathological department have been greatly extended since the erection of the new laboratory building, which affords more and better rooms for its accommodation.

This laboratory is supplied with microscopes, microtomes, paraffine ovens, and the other apparatus necessary in the study of pathological histology. Each student is furnished with a locker containing a microscope with high and low powers, and is assigned to a table containing the necessary stains and reagents for practical work. These are furnished by the laboratory.

The supply of material for the study of pathologic histology is the result of collections made in the pathological institutes of Vienna and Dresden, and embraces almost every known pathologic condition. This collection gives ample material for the regular courses, and, in addition, offers special opportunities to the advanced student who may wish to pursue studies in certain lines of special pathology, as the pathology of the nervous system, genito-

urinary tract, skin, etc. It is especially to the graduate student that this collection presents a fine opportunity for special work, as he is thereby offered practically the same advantages as those given in the principal laboratories abroad.

In addition, an abundant supply of fresh material comes from the clinics of the University Hospitals, and this is utilized to the fullest extent in the teaching both of gross and of microscopical pathology. The laboratory is fitted with a Bausch and Lomb carbonic acid freezing microtome for use in the making of quick diagnoses and in the preparation of fresh material for class study. By the use of this instrument stained sections may be had in three minutes after the removal of the tissues from the body, and the student is thus enabled to make a study of morbid changes impossible in hardened material.

The required course in pathologic histology lasts eight weeks, five afternoons a week being required, though Saturday afternoon is usually taken for this work. The student studies the histology of morbid processes, in fresh and hardened material, in stained and unstained sections, and applies chemical tests, etc. He is further required to demonstrate his knowledge by drawings and written descriptions of the specimens. The course includes the study of the most important alterations in the blood and circulatory systems, changes in nutrition, tumors, infectious diseases, and the more important diseases of special organs. About one hundred and seventy-five specimens, stained and ready for mounting, are given to the class as unknowns for identification and demonstration. These become the property of the student. The study of inflammation is also made in the living animal.

Written reports upon each of these specimens are required, and, in addition, fifty drawings.

A practical working knowledge of pathological technique is also required for each student; and he is instructed in the methods of examination of fresh tissues; in the various processes of hardening, embedding, cutting, etc., and in the use of the most important stains.

A special course in technique and in the diagnosis of malignancy is offered to junior students who have finished the regular course. Reagents and apparatus are furnished by the laboratory, and separate rooms are set apart for the use of the advanced students. The abundance of valuable material available for this course offers unusual opportunities to the physician who may wish to take special work. To such and to those who wish to work up material of their own, every facility is afforded. The members of this advanced class form a Journal Club which meets weekly. At these meetings reports are made in detail on material given the student for examination, papers are read, specimens exhibited, and general discussions held.

An advanced laboratory class for senior students is held on Saturday mornings. This course is limited to the special study of the blood, genito-urinary tract, eye, etc. An opportunity is given each student for work in any special line he may choose for original investigation.

The laboratory contains a set of pathological models and a neucleus of a pathological museum, which already contains many rare and valuable specimens. They are utilized for teaching purposes as far as possible.

Autopsies.—Clinical autopsies are held before the classes and the causes of death, if demonstrable, pointed out. No regular time can be set for this work, but a larger number of cases come under observation each year. A special room has been fitted up in the basement of the Homœopathic College building for this special purpose. The post-mortems are usually made under the supervision

of the professor of theory and practice. In the event of a post-mortem the students are excused from other work in hand so that they may attend.

BACTERIOLOGICAL LABORATORY

The west half of the second floor of the new laboratory building is devoted to work in bacteriology. The two main laboratories contain seventy-eight desks, used by beginners and by advanced students. All the material required for the work is supplied, practically at cost, from a well-stocked dispensing room. Four rooms are devoted to research work of the professor in charge, his assistants, and others qualified to carry on special studies. An incubating room, maintained at a constant temperature, is provided with individual drawers for the use of students. A similar room is reserved for the work in research. A cold room, including a spacious refrigerator, is cooled by means of a liquid-carbonic-acid plant in such a way that the refrigerator can be kept at, or below, the freezing point, while the temperature of the room itself is maintained about 60° F. A special compartment of 1,000 cubic feet capacity is reserved for experimental room disinfection. Provision is made for operative work on animals, cremation of infected material, sterilization of cages, etc. Well-lighted rooms in the basement are devoted to store rooms and animal rooms, and, in addition, a large room for micro-photography. Gas and water are supplied to the hoods in every work room. The laboratory is equipped with apparatus and instruments of the best make.

HYGIENIC LABORATORY

In this laboratory the sanitary examination of foods and drinks forms a prominent part of the practical work. Samples of food, milk, water and other articles of human consumption are gathered from all parts of the country or are sent in for examination. Since more commodious

quarters have been afforded, the facilities for original research have been much increased. Special rooms have been fitted up for the chemical, microscopical, and bacteriological study of foods and drinks, and for the prosecution of investigations in the chemistry and action of bacterial and other toxins.

LABORATORY OF PHYSIOLOGICAL CHEMISTRY

This laboratory is in the west half of the third floor of the new laboratory building. The two rooms for the elementary and the advanced work are provided with sixty desks. An adjoining room is equipped with balances and microscopes. A preparation room contains, among other things, a distilling plant from which the water is taken in pipes to different parts of the building. There are also well-equipped rooms for combustions, for optical work, and for gas analysis. In every room there are spacious hoods with fittings for steam and compressed air, in addition to gas and water. By an elaborate system of fan ventilation, the air in the laboratory is renewed every fifteen minutes. A recitation room is in direct connection with the laboratory.

Several courses are given in the department of physiological chemistry. A lecture course discussing the commoner phenomena appertaining to the subject and a laboratory course supplementary thereto are required of every student. No student can be admitted to these courses who has not done the required work in the other branches of chemistry or an equivalent.

There are a number of advanced courses adapted to the needs of those who desire to qualify as sanitary officers, sanitary engineers, etc.

PATHOGENETIC LABORATORY

A laboratory of experimental pathogenesis has been established in the Homœopathic Hospital. This labora-

tory is equipped with the necessary apparatus for experimentation with medical substances on the health body. It is a special feature of this school. Provings are made and each advanced student is required to do a certain amount of original work in the pathogenetic field. In order that those who submit themselves to the experiments may be under the entire censorship of the director, a provers' table has been established at the expense of the department. The student puts himself under obligation, which of course is optional upon his part, to submit to the control of his diet, habits, exercise, etc. He must make to the director a complete report of all his varied physical experiences every twenty-four hours.

He is furnished with a book in which he records whatever variation he may perceive in himself from the normal. These records and reports are made the basis of an extended report which is published in the College publication at regular intervals. By this method, it is possible to attain a high degree of accuracy in the results of experiments.

As considerable knowledge of physiological chemistry, physiology, and symptomatology is essential to making accurate observations, especially upon others, this course is not open to the lower classmen.

LABORATORY OF APPLIED PATHOLOGY

The acquisition of an additional member of the teaching corps in 1905 made it possible to establish in the hospital a laboratory for the examination and analysis of fresh pathological and suspicious material. A commodious room has been fitted up in the high basement of the hospital, where at least two hours are spent every morning examining tissue, sputum, blood, stomach contents and such other parts of the body or secretions and excretions, as may be sent to the laboratory by the clinical staff. The director is always personally in charge, and associates

with himself a senior student as first assistant and a junior as second assistant. The assistants are so rotated that each student serves two periods as junior and two as senior assistant.

This laboratory is one of the most practical in the entire course, for it affords the student ample opportunity, with microscope and test tube, under constant supervision, to apply the theories and technique he has been taught in courses heretofore outlined.

THE HOSPITAL AND CLINICAL FACILITIES

Important as are the laboratory methods of instruction, the necessity of practical knowledge of sickness and disease has not been overlooked. Unique hospital privileges are offered the students of this Homœopathic Medical College. The state provides and equips its hospital and guarantees its maintenance. This obviates the necessity for private patients and the service needful to their reception. No patient is admitted except on his agreement to be presented to the class. The result is that every patient is available for clinical study. The city colleges, boasting of vast clinical facilities, have the associated hospitals filled with private patients, inaccessible to students, or with indigent people kept by the noble charity of endowment. By the very virtue of this, endowments are given for sweet charity's sake, and not to promote the clinical knowledge of medical students. Therefore, few hospital wards are open for the free and unlimited use of undergraduates.

On the other hand, the University Hospital, Homœopathic, is in reality a grand clinical laboratory. The patient is admitted, primarily, for the benefit of the associated medical college, and, incidentally, that he may be cured. He is examined, his case diagnosed, his treatment

prescribed and administered, as far as may be, by the medical students. When an operation is performed, it is in the presence of the class. The anæsthetic is given and assistance rendered by the students. All of this is done, of course, in the presence and under the direction of a member of the faculty, but the clinical knowledge which the student gains by actual experience is invaluable. It is doubtful if any other institution offers such close contact with an abundance of clinical material.

Did space permit, it would be interesting to take up the several departments of work, and detail the methods of each. In Physical Diagnosis, in Surgery and Surgical Dressings, in Gynæcology and daily treatment of Gynæcological cases, in the care and treatment of General Medical cases, in the diagnosis and treatment of Diseases of the Eye, Ear, Nose, and Throat, in the use of the trial case and correction of errors of refraction, in the examination, delivery, and after care of Obstetrical cases—in all these lines, every student of the upper classes has experiences which are multiplied many fold.

A NEW HOSPITAL BUILDING

The old hospital building, erected in 1892, was found inadequate to the needs of the college. To relieve the pressure and increase the clinical facilities of the University, the State Legislature increased the mill-tax, and made possible the erection of a magnificent new Homœopathic Hospital. The building was completed in 1901. Finished and occupied, it is the finest Homœopathic Hospital in the world. There may be others larger, but a capacity of one hundred and forty beds affords ample clinical facilities.

The new building, planned by a New York architect, is in the form of a T. It is built of native granite,

"nigger-heads," to the top of the first story, and, above that, of Illinois gray pressed brick. With its roof of red tile, and a frontage of three hundred feet, it is an imposing building.

The interior finish is of red oak. There are six wards and many private rooms. The operating room is of marble and iron, thoroughly aseptic. The eye operating room is finished in white marble. Every modern idea in construction and arrangement has been incorporated in the plans.

Friendliness in Ann Arbor to the cause of Homœopathy is shown by the unanimity of the municipal vote to donate seventeen thousand dollars for the purchase of a site for the building.

The site is particularly well adapted to the purpose. It is directly across the street from the University grounds, and is on the street car line. Five acres of land and a fine residence make up the grounds and house of what for generations has been one of the finest homes in the city.

Clinics are held daily, at which times examinations of patients are made by the professors in charge, and by students under the direction of professors, prescriptions given, and surgical operations performed in the presence of the class. The several clinics are held on separate days, of which the profession at large will be notified.

In addition to special rooms with all modern apparatus and appliances for aseptic surgery, there is a lying-in-ward. Each senior student is required to attend cases of labor, and become familiar with the duties of the lying-in room, under the immediate direction of the Professor of Obstetrics.

The electrical department of the hospital is equipped with one of the best Roentgen ray outfits in the country.

Apparatus was installed last year with one of the most powerful coils manufactured, which, together with the accessories, answers admirably for all diagnostic and clinical purposes.

Much attention is paid to Diagnosis, and the abundance of clinical material furnishes many interesting cases. Students are required to take the history of patients, and, under proper supervision, make personal examinations and prescriptions. It is the aim of the Faculty to make clinical instruction systematic and thorough.

The hospital is kept open for patients during the entire year. Under the present organization, patients are much better accommodated, and clinical instruction is rendered more systematic and efficient than was formerly possible. The expenses to patients are only for their board, unusual appliances or special nursing, and medicines; the services of the Faculty being rendered gratuitously.

Patients who desire to enter the Hospital are requested to write to the Superintendent to ascertain if there is room for their accommodation, and to obtain a circular giving the rules governing admission.

SUMMARIZATION OF HOSPITAL STATISTICS

In estimating the clinical features of this institution, it must be noted that all the cases here enumerated were patients in the hospital and actually presented before the regular classes and treated as clinical cases. Each case represents a separate individual.

CLASSIFICATION OF PATIENTS DURING THE YEAR PRECEDING JULY 1, 1906.

General Medical	211
General Surgical	381
Ophthalmological	654

Genito-Urinary	146
Gynæcological	209
Otological	219
Laryngological	103
Neurological	127
Dermatological	104
Pædiatric	71
Rhinological	174
Obstetrical	31

The occupation of these patients was, in order of their numbers, as follows: Housewife, Farmer, Laborer, Child, Domestic, Clerk, Unclassified, Professional (including teachers, ministers, physicians, etc.), Railroad Man, Mechanic, Merchant, Retired.

These individual patients represent over 20,000 prescriptions made during the college year.

In addition to the regular hospital service, the General Infirmary of the county, Washtenaw, having a large number of inmates, is under the entire medical control of a member of the Homœopathic Faculty. A considerable amount of material is available for the students from this source.

HOURS OF SERVICE

Clinical examinations, clinical demonstrations and operations in the actual presence of the class and the patient, consume, as the regular schedule is now arranged, in the aggregate, 3,046 hours. This does not comprise the time occupied by the senior class in making dressings of surgical cases, after-treatments and examining new patients. To include this service, two hours daily will have to be added, viz.: from 8 A. M. to 9 A. M and from 4 P. M. to 5 P. M.

REQUIREMENTS FOR ADMISSION

Every applicant for admission to the Homœopathic Department must be at least seventeen years of age, and present to the Faculty satisfactory evidence of good moral character.

Women are admitted, as to all other departments of the University, on the same conditions as men.

During the past few years the rules for admission to medical colleges have materially changed. Formerly, the college fixed its own entrance requirements and made its own curriculum. The colleges no longer have control over the entrance of students to the study of medicine.

A board acting under laws for the regulation of the practice of medicine controls the entrance to colleges, and examines the students after graduation before they are licensed to practice.

As the laws and rulings of boards in the several states are somewhat different, the student is advised, by all means, to be sure he is eligible to become a medical student in the state in which he lives or in which he desires to locate. Before coming to college he should correspond with the secretary of his state board having the matter in charge, and receive from him a medical student's certificate for his state. However, if he is not a resident of and wishes to qualify in Michigan, he should note carefully the rules and requirements of this state as set forth under "The Requirements for Michigan Students."

A considerable number of students coming from other states have qualified with the Michigan State Board of Registration in Medicine, and taken their examination for admission to practice before that board. Michigan now has reciprocity with twenty-two states, which permits all physicians who have been admitted to practice upon examination, the privilege, upon payment of a required fee in the state in which they contemplate locating, of being licensed without further examination.

REQUIREMENTS FOR MICHIGAN STUDENTS

Residents of the State of Michigan, or those contemplating registering under the Michigan laws, will observe the following which is issued by the State Board of Registration:

1. As used in the table upon the application sheet here attached, a Count is the measure of the work successfully completed in a secondary or high school, pursued an entire school year of 38 weeks, in one weekly recitation period of not less than 45 minutes; a Minor Unit is four counts and a Major Unit is five counts.

2. The required group of seven major units (35 counts), or nine minor units (36 counts) must be presented by all applicants. The total of twelve major units (60 counts) or fifteen minor units (60 counts) required may be selected from the elective group. The credit which will be accepted in the several studies is shown by the printed figures with exception of normal excesses in required Mathematics and Latin, which will be subject to credit; also a one unit credit in a two unit study will be credited in conditions. In the credit column, either the major or minor units completed by the applicant are to be entered and their count value in the proper column to the right. In recording, either the major or minor unit standard must be adhered to in its proper column.

3. English Literature of the elective group may not be counted unless a year has been given to that subject in addition to the required English.

4. Civics is not accepted as a subject, but may be counted as a part of American History.

5. Biology is the equivalent of Botany and Zoology, and it can be given no credit if an applicant is credited with Botany and Zoology.

6. The scope of the course required is recorded on page 30.

7. In cases where the study was not pursued in the school, the pertinent facts should be stated in the column of remarks.

8. Certificate or diploma will not be endorsed unless blank is properly and fully filled out.

9. Return recommendation promptly to B. D. Harison, M.D., Secretary, 205 Whitney Building, Detroit, Michigan. Or the recommendation may be mailed to either the Dean or Secretary of the College, who will be pleased to submit the same to the proper authority.

NOTE.—An applicant for Endorsement of Preliminary Education presenting a recognized literary diploma or certificate for entrance to medical schools of a minimum standard of not less than nine (9) major units, or twelve (12) minor units, in accordance with the Minimum Standard of Preliminary Education adopted by the Board, may be conditioned in three units, and must remove such conditions before the Michigan Board of Preliminary Examiners, or other recognized authority (course and examination in the Literary Department of the State University or attendance and examination in a recognized secondary or high school) before beginning the second course in a recognized medical school, counted toward the degree, otherwise the applicant will be held as not having complied with the requirements of the Board relative to its Standard of Preliminary Education; Provided, that, if at the time of seeking endorsement the applicant, in addition to the nine (9) major units or twelve (12) minor units required in the recognized diploma or certificate as a qualification for conditions, presents a recognized supplemental certificate of course and examination in necessary studies not covered in the presented diploma or certificate, of a date prior to registration, or matriculation in a medical school, such supplemental certificate may be made a part of and included in the original diploma or certificate upon which endorsement is sought in accord-

ance with the method of standard adopted by the Board.

The applicant can have blank enclosed filled out by his high school principal or a school officer authorized to act in his capacity, or he can send to the College or Secretary of the State Board for the regular official form furnished for that purpose. In either case he should send in his name to the College for preliminary enrollment:

Scope of the Preparatory Work

The following descriptive outline indicates the amount of preparation expected in each of the subjects named:—

Composition and Rhetoric.—The three units in composition and rhetoric should cover the following subjects:

Composition.—As preparation for this requirement, sustained and regular practice in writing is earnestly recommended. The student should prepare numerous written exercises throughout the four years of the high-school course, and a sufficient number of these exercises should be corrected by the teacher and revised by the student to secure the desired accuracy. The subjects upon which the student writes should not be drawn exclusively from literature; a considerable proportion of them should be taken from the student's everyday experience; and topics should be so distributed as to give proper training in the various types of discourse, namely, description, narrative, argument, and exposition.

Rhetoric.—The student should be grounded in the essentials of rhetoric, but those principles should receive emphasis which are most likely to be of service to him in his practice in writing, such as the principles of sentential structure, paragraphing, and the outlining of the essay.

Grammar.—The applicant should be prepared to state intelligently the essential principles of grammar and to explain the syntactical structure of any sentence encountered in his reading.

Reading of Classics.—The following books are recom-

mended by the Joint Conference on Uniform Entrance Requirements in English:

1905 and 1906. For reading: Shakespeare's *Merchant of Venice* and *Julius Caesar;* The Sir Roger de Coverley Papers in *The Spectator;* Goldsmith's *The Vicar of Wakefield;* Coleridge's *The Ancient Mariner;* Scott's *Ivanhoe;* Carlyle's *Essay on Burns;* Tennyson's *The Princess;* Lowell's *The Vision of Sir Launfal;* George Eliot's *Silas Marner.* For study and practice: Shakespeare's *Macbeth;* Milton's *Lycidas, Comus, L'Allegro, and Il Penseroso;* Burke's *Speech on Conciliation with America;* Macaulay's *Essays on Addison and Life of Johnson.*

1907, 1908, and 1909. For reading: Shakespeare's *Merchant of Venice* and *Macbeth;* The Sir Roger de Coverley Papers in *The Spectator;* Irving's *Life of Goldsmith;* Coleridge's *The Ancient Mariner;* Scott's *Ivanhoe* and *The Lady of the Lake;* Tennyson's *Gareth and Lynette, Lancelot and Elaine,* and *The Passing of Arthur;* Lowell's *The Vision of Sir Launfal;* George Eliot's *Silas Marner.* For study and practice: Shakespeare's *Julius Caesar;* Milton's *Lycidas, Comus, L'Allegro,* and *Il Penseroso;* Burke's *Speech on Conciliation with America;* Macaulay's *Essay on Addison* and *Life of Johnson.*

It is expected that the applicant will have read these books appreciatively and will have made himself familiar with the subject-matter and the form of each work. The reading should be connected, in reasonable measure, with the lives and characters of the authors read and with the history of their times.

Although the books mentioned above are recommended as preparation for this part of the requirement, they are not prescribed. Books of equal merit, covering a similar range of literary types, will be accepted as equivalents.

It is recommended that in connection with the reading of classics, the memorizing of notable passages, in both prose and poetry, should form a regular exercise through-

out the whole preparatory period. This is all-important for the development of a correct taste in language and literature.

Applicants who present themselves for examination will be asked to write two essays of not less than two hundred words each, one upon a subject drawn from the books in the foregoing list, and the other upon a subject drawn from experience or observation. The language of these essays must be grammatical and clear. The spelling, punctuation, and capitalizing must be correct. The applicant must show ability to discriminate in the use of words and to construct well-organized sentences and paragraphs. A topical outline should accompany each essay. The applicant should also be prepared to answer questions upon the fundamental principles of grammar and rhetoric.

English Literature.—The optional unit in this subject is expected to cover a year's work in addition to the three prescribed units in composition and rhetoric, described above. Stopford A. Brooke's *English Literature*, or any other manual, may be used for an outline of the subject. As much time as practicable should be given to the careful reading of representative authors in each period.

N. B.—This requirement must not be confused with the reading of classics described under composition and rhetoric.

Mathematics.—The three units in mathematics required of all applicants include algebra through quadratics, and geometry, both plane and solid. Beman and Smith's *Elements of Algebra*, and the same authors' *New Plane and Solid Geometry* are mentioned to indicate the scope and character of the work required.

Physics.—The required unit in physics includes an amount represented by Carhart and Chute's *High School*

Physics. The instruction in the class room should be supplemented by work in the physical laboratory to the extent of at least one period a week throughout the school year.

Greek.—The two units in Greek should be made up of grammar, prose composition, and reading, as follows:

Grammar.—Goodwin's or Hadley's. The inflection must be thoroughly mastered.

Prose Composition.—Jones's Exercises, with special reference to the writing of Greek with the accents, and to the general principles of syntax. Woodruff's *Greek Prose Composition* is taken as an equivalent.

Reading.—Three books of Xenophon's *Anabasis* and two books of Homer.

The so-called continental sound of the vowels and diphthongs, and pronunciation according to the written accents are preferred.

Latin.—An applicant should have completed Jones's *First Latin Book* or an equivalent amount in some other introductory text-book; and should have read four books of Caesar's *Gallic War,* and one of the orations of Cicero.

The units in Latin should be made up of grammar, prose composition, and reading, as follows:

Grammar.—A thorough preparation in the elements of etymology, syntax, and prosody.

Prose Composition.—Applicants will be asked to translate into Latin a passage of connected English narrative, based upon some portion of the Caesar or Cicero read. As a text-book, Jones's, Collar's, Deniell's, or Bennett's is recommended. Special care should be taken with the training in prose composition.

Reading.—Four books of Caesar's *Gallic War;* six select orations of Cicero; and six books of Virgil's *Aeneid.* For any two books of the *Aeneid,* 1,500 lines of Ovid may be substituted. The books named may serve

to indicate the amount and kind of text adapted to give the ability to read passages of moderate difficulty at sight, which is what the University requires.

The Roman method of pronouncing Latin is used at the University.

Botany.—The unit required of those who offer botany for admission is expected to include as much as a competent teacher, trained in laboratory methods, can accomplish with his classes in a year. No attempt is here made to indicate the exact extent of the ground to be covered, for the teacher should have large liberty in selecting material and topics as occasion requires; but it is recommended that one-half year be given to the form, structure, and habits of flowering plants, while the other half-year may be given to the natural groups of plants, physiology, and the adaptation of form and structure to environment.

The following text-books are recommended as offering numerous and helpful suggestions: Atkinson's *Elementary Botany;* Bailey's *Botany;* Coulter's *Plant Relations and Plant Structures;* Spalding's *Introduction to Botany;* Stevens's *Introduction to Botany.* Ganong's *Teaching Botanist* is one of the most useful books for the teacher.

Zoology.—An applicant who offers a unit in zoology will be expected to have a knowledge of at least eight of the following animal types: 1 and 2. Two protozoa: Amœba, Paramœcium, Vorticella, Stentor, Volvox; 3. A Sponge: Spongilla or Grantia; 4. A hydroid: Hydra, to be compared with a medusoid form; 5. An echinoderm: starfish or sea-urchin; 6. An annelid: the earthworm or the leech; 7. A crustacean: crayfish, lobster, or crab; 8. An insect: butterfly (including immature stages), grasshopper, cricket, cockroach, or other insect; 9. A mollusk: the fresh water mussel or one of the snails; 10. A fish: minnow or perch; 11. An amphibian: frog, toad, tree-toad, salamander (Amblystoma), or mudpuppy (Necturus).

These forms must be studied by the laboratory method. Laboratory work should be directed not merely toward a study of animal structure, but as far as practicable toward the study of habits and reactions. It should furnish the basis for the class room discussion of principles; especially of evolution. Of the four periods per week that must be given to the work, two at least should be laboratory periods of two hours each, and the other two should be given to recitations or other class exercises. Careful original notes and drawings must be presented by applicants as part of the examination.

The mention of the following books may serve to indicate the character of the work required: Needham's *Elementary Lessons in Zoology;* Davenport's *Introduction to Zoology;* Jordan and Kellogg's *Animal Life;* French's *Animal Activities.*

Biology.—One-half of the work above outlined in botany together with one-half of that outlined in zoology, will meet the requirements in biology.

French.—The applicant who offers two units in this subject will be expected to read at sight easy French, and to translate correctly into French simple English sentences. The first year of preparation ought to be spent chiefly on the grammar and easy reading; and the second devoted to reading good modern French, accompanied by grammatical analysis and exericses in writing. The texts read should be chiefly narrative and conversational prose; modern, rather than classic, dramas should be read.

The applicant who offers four units in French should be prepared on the two units above described and on additional matter, as follows: The third and fourth years should be spent in acquiring as great a familiarity as possible with the literature, in future practice in composition, and, where feasible, in practice in conversation. Some of the plays of Corneille, Racine, and Moliére should be

read; some specimens of the best prose in history, memoirs, and essay; and some of the lyric poetry of this century. It is advised that the literature as a whole be studied in Saintsbury's or in Warren's Primer. The applicant ought also to be able to express himself in French grammatically and with ease on ordinary topics.

German.—The applicant who offers two units in German should be able to pronounce German correctly and to take part with reasonable correctness and facility in a simple conversation upon some topic drawn from his preparatory work. He will be expected to evince his thorough familiarity with the everyday facts of grammar by putting illustrative English phrases into German, and to be able to translate at sight a passage of fairly easy prose.

The applicant who offers four units in German should be prepared on the two units above described and on additional matter, as follows: He should have read five classical dramas, selected from the works of Goethe, Schiller, and Lessing; and Schiller's *History of the Thirty Years' War,* or an equivalent amount of other historical reading or of good modern fiction. He will be required to write a short essay in German upon some subject taken from the works which he presents. He ought also to be able to express himself in German grammatically and with ease on ordinary topics.

History.—The requirements of one, two, or three units in history may be met by selections from the following list:

Ancient History to the year 800 A. D., one unit.
Mediæval and Modern History, one unit.
English History, one unit.
United States History and Government, one unit.

A year's work in General History, with the use of such a book as Myers's *General History,* will still be accepted

as one unit, though it is believed that better results will be obtained if a year is given to Ancient History down to the Fall of the Roman Empire (or, preferably, to the year 800 A. D.), and a year to Mediæval and Modern History.

Physiography.—Dryer's *Lessons in Physical Geography,* Davis's *Physical Geography,* or Tarr's *New Physical Geography* is recommended as a text-book. The text-book work should be supplemented by conferences, field excursions, laboratory work in meteorology, and the reading of such books as Geikie's *Earth Sculpture,* Shaler's *Outlines of the Earth's History* and *Aspects of the Earth,* Russell's *Lakes of North America, Glaciers of North America, Volcanoes of North America,* and *Rivers of North America,* and Muir's *Mountains of California.* In connection with the laboratory work, Davis's *Elementary Meteorology* and Ward's *Practical Exercises in Elementary Meteorology* are recommended.

Chemistry.—The nature and extent of the requirements in this subject are indicated by the mention of Freer's *Elementary Chemistry* as a text-book, or an equivalent amount in Remsen's *Introduction to the Study of Chemistry.* The study of the text should be accompanied by laboratory work.

REGISTRATION

All matriculates who have any intention of practicing medicine in the State of Michigan must present their credentials to the Michigan State Board of Medical Examiners, which can be done through the Faculty of the Department. The minimum legal requirements for admission to a medical school in this State are defined by statute.

Before admission to examination, every applicant is required to present to the Secretary of the Faculty the Treasurer's receipt for the payment of the matriculation fee and the annual fee. It will, therefore, be necessary

for him to apply to the Secretary of the University at his office in University Hall, register his name as a student in the Homœopathic Medical College, and pay his fees to the Treasurer. In case of rejection, the money paid preliminary to examination will be refunded.

The applicant is advised to call in person upon the Dean or Secretary of the Faculty as soon as convenient after arrival in Ann Arbor.

ADMISSION TO ADVANCED STANDING

Persons who have studied medicine elsewhere may be admitted to advanced standing upon evidence of proficiency in the studies which have already been pursued by the class to which they seek admission.

ADMISSION OF WOMEN

The course of instruction for women is in all respects equal to that for men. Practical Anatomy is pursued by the two sexes in separate rooms; but in the lectures, in public clinics, in the laboratories, and in various class exercises, it is found that both sexes may attend with propriety at the same time.

SCHEDULE OF STUDIES

The following schedule shows quite accurately the arrangement of studies for the course of four years. The lectures are usually given in the forenoon and the laboratory and clinical courses, with a few exceptions, in the afternoon.

For the laboratory courses the students are divided into sections, and work in periods. A period is in some

courses twelve weeks, in one six weeks, in the others nine weeks. The sections and periods are so arranged that, by repeating the courses each year a number of times, each student can be occupied by regular laboratory employment and in the allotted time accomplish his work. Excepting the laboratories of pathology and experimental pathogenesis, the laboratory courses are completed during the freshman and sophomore years.

FIRST YEAR

LECTURES AND RECITATIONS IN THE FIRST SEMESTER

Subjects	*Hours Required*
Principles of Medicine,	1 hour per week.
General Chemistry,	4 hours per week.
Histology and Embryology,	3 hours per week.
Osteology, Laboratory and Recitations,	2 hours every day for a period of six weeks.
Physics (optional),	5 hours per week.

SECOND SEMESTER

Subjects	*Hours Required*
Principles of Medicine, Therapeutics and Minor Surgery. These subjects are so arranged that they occupy	2 hours per week.
Physiology,	4 hours per week.
Organic Chemistry,	4 hours per week.
Histology and Embryology,	3 hours per week.
Toxicology,	2 hours per week.

LABORATORY WORK DURING THE FIRST YEAR

Anatomy (2 periods), 1 to 5 P. M., for periods of 9 weeks.
Chemistry, period of 12 weeks, from 10 to 12 each A. M.
Histology and Embryology, 1 to 5 P. M., for a period of 9 weeks.

SECOND YEAR

FIRST SEMESTER

Subjects	*Hours Required*
Materia Medica,	1 hour per week.
Physical Diagnosis,	1 hour per week.
Surgery,	1 hour per week.
Physiology,	5 hours per week.
Bacteriology,	3 hours per week.
Physiological Chemistry,	3 hours per week.

SECOND SEMESTER

Materia Medica,	1 hour per week.
Physical Diagnosis,	1 hour per week.
Surgery,	1 hour per week.
Physiology,	3 hours per week.
Hygiene,	3 hours per week.
Pathology,	4 hours per week.

LABORATORY WORK DURING THE SECOND YEAR

Bacteriology, every afternoon from 1 to 5, until close of period.

Physiological Chemistry, every afternoon from 1 to 5, until close of period.

Physiology (elective), every afternoon until close of period.

THIRD YEAR

General Medicine,	4 hours per week.
Materia Medica,	3 hours per week.
Gynaecology,	5 hours per week.
Surgery,	5 hours per week.
Ophthalmology and Otology,	4 hours per week.
Practical Pathology, Laboratory,	5 hours per week for a period.

The work for the third and fourth-year students is largely clinical. The courses in some of the departments, as Materia Medica, Theory and Practice, Surgery, etc., require two years for completion. In these and in the clinics the third- and fourth-year students are classed together.

In the one-year courses these classes are separate, of course. Reference should be made to the schedule card given for the fourth—or senior year.

FOURTH YEAR

The following is the schedule for the Senior Class, one semester. It indicates the plan of the work and undergoes slight changes as the subjects vary. The hours for clinics are stationary, never being changed except for important reasons.

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
A. M. 8	Hospital Service	Hospital Service	Hospital Service	Hospital Service	Hospital Service
9	Ophthal-mology	Surgical Clinic	Theory and Practice	Materia Medica	Materia Medica
10	Materia Medica	Surgical Clinic	Dermatology	Laryngology Physical Diagnosis	Surgery
11	Obstetrics	Surgery	Medical Clinic	Medical Demon-stration Clinic	Obstetrics
P M. 1:15	Theory and Practice	Eye, Ear, Nose and Throat Clinic	Gynæcological Clinic	Eye, Ear, Nose and Throat Clinic	Surgical Clinic
2	Gynæcological Clinic	Eye, Ear, Nose and Throat Clinic	Gynæcological Clinic	Eye, Ear, Nose and Throat Clinic	Surgical Clinic
3	Gynæcological Clinic	Medical Jurisprudence	Gynæcological Clinic	Nervous Clinlc	Surgical Clinic
4	Hospital Service	Hospital Service	Hospital Service	Hospital Service	Hospital Service

THE PRACTICAL CHAIRS

MATERIA MEDICA AND THERAPEUTICS

Materia Medica is taught as a natural science. Beginning with a series of lectures upon the principles of Homœopathic therapeutics to the freshmen, courses are given through the entire four years. During the junior and senior years three lectures are given weekly. As far as possible, the original provings are made the basis of the studies. The genius, characteristics and relationships of drugs are taught according to the methods that a long experience has demonstrated to be the best. What is ordinarily called the physiological action of drugs receives due attention.

In no department of medicine need the discriminating powers of the mind be so much disciplined as in this branch. The cultivation of the memory is also of great importance. To develop these faculties the "quiz" is of great use. Every student is required to stand a thorough questioning and examination upon each remedy considered.

Reference has been made, previously, to the Laboratory of Drug Pathogenesis in which each student is expected to do a certain amount of original work towards amplifying the materia medica.

A course in homœopathic pharmacology is also given.

The number of hours given to lectures and recitations in materia medica is 260—,special lectures and laboratory hours not included.

All the text-books published upon the subject are in the library.

PRINCIPLES OF MEDICINE

This course is given to the freshmen by the professor of theory and practice. It continues through the entire year with one lecture weekly. The object is to familiarize

the student, as soon as possible, with medical phraseology and at the same time give him the scientific explanation, so far as possible, of the nature of disease, its predisposing and determining causes, and the principles upon which a system of cure must be constructed. Attention is given to historic medicine and to the various systems that have been in vogue as means of attempted cure. The students occasionally accompany the teacher through the hospital wards for the purpose of having their attention called to the different types of patients and teaching them how and what to observe.

The student is required to take copious notes and to present his note-book from time to time for examination and correction.

INTERNAL MEDICINE

The instruction in theory and practice is didactic and clinical. The required number of hours for lectures, recitations and quizzes is 236; the number of hours for scheduled clinics is 400. In addition to this, supplementary lectures and discussions are given from time to time. At least a hundred hours are also given to sub- and demonstration-clinics. The subject is divided into courses covering all the ground, both general and special, with which a physician in ordinary practice must be familiar. The aim is to make the student, by applying his knowledge of physiology, anatomy and pathology, a good diagnostician; his knowledge of materia medica, a good prescriber. During the last semester of the senior year, the students have the privilege of requesting the discussion of subjects in which they may have special interest or which they desire to review. Subjects and cases are assigned students, upon which they prepare papers and reports. These reports are read in the presence of the professor and the entire class, who have the privilege of asking proper questions, which the writer is supposed to be prepared to answer.

The immense University library, which contains thousands of medical books and nearly every medical and scientific journal published, is always available in the preparation of the papers and reports. No special text-book is recommended, but the student should bring to college all works upon the subject of medicine he may have acquired. As a very large number of the students are from the families of physicians, frequently they already have control of a number of books. The library, containing all the literature of moment ever published in the Homœopathic school, makes the purchase of special text-books not so necessary as in institutions less generously provided.

DISEASES OF CHILDREN

Especial attention is given to Pediatrics in connection with general medicine. Several lectures are given upon the subject of diseases incident to the extremes of life in which the susceptibilities of nurslings and growing children are taught separately. The contagions and infections peculiar to childhood are considered in the lectures upon infectious diseases. A special course upon the management of children is given in the Training School for Nurses; certain ones of these lectures the medical students are required to attend. Infant feeding is referred to in another connection in this catalogue.

DIETETICS

A special course is given in which the problems of food in relation to health and disease are discussed. The feeding of invalids and infants is given special attention. In the clinics, whenever the question of the effects of diet, the preparation of foods and drinks and their proper administration can be profitably considered, the most is made of the opportunity. There is in the hospital a diet

kitchen in charge of a scientfic dietitian, in which the special diet lists are prepared and from which they are served. The senior students in charge of cases, under proper supervision, are required to make out orders for the feeding of their patients and to observe the preparation of the food.

PHYSICAL AND MEDICAL DIAGNOSIS

These branches are taught as separate courses with the use of text-books supplemented by lectures. Practical demonstrations are given, using the cases in the hospital. The course in physical diagnosis begins with the sophomore year and continues with one hour a week until the close of the first half of the junior year. The class is divided into sections for personal instruction in the arts of inspection, auscultation, percussion, palpation, etc. In this way each student is instructed individually and is not permitted to leave his section until he can recognize, without assistance or suggestion, the commoner cardiac, respiratory and abdominal phenomena presented in a number of typical and "mixed" cases. Particular care is taken to qualify the students as physical examiners in life insurance, or for pension and other official boards.

SURGERY

The courses in this department comprise a continuous series lasting three years, covering systematically the entire subject of general surgery.

During the second year, a complete course of lectures is given on the general principles of surgery, minor surgery and bandaging.

The subjects of special, regional and operative surgery are divided into two courses. Each course is given in alternate years. Thus, while the juniors and seniors attend the same lectures, each graduating class will have

covered the whole subject without repeating the work of the preceding year.

While the didactic work is intended to be complete enough to fit the student to take the examination given by any state examining board, the clinical teaching is considered of prime importance. A surgical patient upon entering the hospital is assigned to one of the senior students, whose duty it is to take the history of the case and to make such examinations as will enable him to diagnose. The student continues in charge of the patient until dismissed from the hospital. If there be an operation, he does all the dressings and prescribes the remedies under the direction of the surgeon in charge. This gives the student the advantages of both practical, routine experience and personal instruction. One hour in the morning and one in the afternoon are set aside for this service.

Another important feature of the clinical work is the assisting at operations. Each member of the senior class is required to be, for a certain period, assistant anæsthetist, anæsthetist, instrument man, second assistant and first assistant to the operator. Last year each member of the class spent, at least, ten weeks in this special work. All of the clinical assistants to the operator are members of the senior class. The house surgeon has the general oversight of the anæsthetics. The fact that the hospital is purely a clinical institution makes this laboratory method of clinical teaching possible. The college schedule requires 200 hours of class-room work, and 720 hours of operative clinics in surgery. This does not include cases requiring especial attention out of regular time, emergency cases and special demonstrations in surgical technique. Reference has been made in the section of Anatomy to the course in operative surgery upon the cadaver which is given in the post-mortem room of the college building.

OPHTHALMOLOGY AND OTOLOGY

The proper treatment of most diseases of the eye, ear, nose, and throat depends upon an accurate diagnosis of the disease. Blindness is many times the result of some doctor's ignorance and neglect of a common disease of the eye. Many functional nervous conditions and symptoms referred to remote portions of the body are now recognized to be "eye reflexes." The modern physician must know about these things, and be skilled in their diagnosis.

Regular lectures on these important specialties, amply illustrated from the abundance of clinical material at the disposal of the Faculty, are given in the third and fourth years. The eye and ear, nose and throat clinic forms one of the most interesting features of the clinical work, and affords the class every facility for a thorough, practical study of all the diseases of these organs that come under the observation of the physician. Students have cases assigned them for dressing and treatment, from time to time, and thus acquire practical skill and knowledge in diagnosis, in the use of the various instruments, and in the correction of errors of refraction. Upward of two thousand pathological conditions affecting these organs were presented this year. Practical application of the knowledge obtained in the bacteriological and pathological laboratories is made a special feature of this chair.

Refraction is the most important branch of ophthalmology and, in a sense, is fundamental to the whole of that science. The large out clinic, patronized by multitudes of eye users—the University students—makes it possible to give every senior and junior almost daily practice with the test-case. It is expected that at graduation every student will be prepared to find and properly adjust the glasses required by any patient.

During the past year every senior student has exam-

ined scores of cataract cases and has witnessed the extraction of at least one hundred cataracts. By actual contact he learns the methods of diagnosis, preparation for operations, and after-care of such patients. In this practical way, he is taught the treatment of complications and acquires a degree of confidence in his own ability, which must prove of value to the practitioner.

The number of regular hours devoted to these branches in the hospital clinics, recitations, lectures, conferences and special and emergency work not counted, is 500.

DISEASES PECULIAR TO WOMEN

The course of study in these branches is so arranged that separate lectures are given to the several classes in a graded course. Students are drilled in the fundamental branches of gynæcology, and are taught the use of instruments, the various methods of making gynæcological examinations, etc. With the third year the student enters upon both didactic and clinical work.

The number of hours devoted to class-room work in this branch is 144.

SURGICAL GYNAECOLOGY

In the Gynæcological, the same as in the General Surgical Clinics, the seniors assist in all operations, by sections, each one, in turn, getting actual experience in all the details of preparation, anæsthetization, handling instruments, putting on dressings, etc.

In this, the only practical way of teaching these subjects, every detail of technique is mastered. The student is told why and how the several steps are taken and the power of observation as well as mechanical dexterity, is developed to the highest possible degree.

The care of the patients, both medical and operative, is in the hands of students to whom they are assigned

upon entering the hospital; the professor or a house physician supervising the service.

The number of hours given to clinical gynæcology, emergency cases and sub-clinics not counted, is 680.

OBSTETRICS

The course begins in the junior year when the anatomical, physiological and pathological features of the subject are taught by recitations, lectures and demonstrations.

In the senior year lectures are delivered upon special subjects, and the senior students are required to make physical and local examinations in the sub-clinics of this department, thus familiarizing themselves with the various methods of practicing touch, palpation, obstetric auscultation, etc., utilizing to the best possible advantage the many patients availing themselves of this special department of the clinic. Cases of obstetrics are assigned to each senior for his especial delivery and personal attendance. In the year just closed each senior witnessed from ten to twenty confinements.

The students are not only thoroughly taught the general principles, and the management of normal labor and the puerperium, but are also well drilled regarding the forces involved in the mechanism of labor. They are then well prepared to understand the various abnormal and pathological conditions attending labor. Especial emphasis is placed upon the treatment of the pathology of the puerperium. The various obstetric operations are carefully outlined and explained, and many of them are illustrated from the numerous cases in the obstetric clinic.

The obstetric clinic is, of course, always an emergency clinic. The senior students are required to lodge in houses having telephones so that they may be summoned. The law and rules of the Board of Regents make provision for as many cases at the hospital as may be required. Each student not only has the privilege but is

required to conduct a number of confinements in the presence of a section of his class and a demonstrator; the professor of obstetrics is usually present. The average number of deliveries that each senior has attended for the past several years has been over 25.

The number of hours devoted to the teaching of obstetrics, not including clinics and demonstrations, is 144.

LARYNGOLOGY AND RHYNOLOGY

It has been delegated to this department to give instruction in the methods of the modern medical society. One who has observed the methods used in medical societies, and listened to the discussions of papers presented, must have been impressed with the uncertainty of the program and the halting speech of the participants. Busy doctors have little time for study and rarely indulge themselves the luxury of post-graduate instruction. They may be excused for this, but to neglect the opportunities afforded by membership in and attendance upon the medical societies is not only the spurning of social joys, but also little short of a crime against society. It is beneficial in that the physician attending such meetings listens to papers on practical subjects, and hears them discussed by practical men. He absorbs an immense amount of information, and undoubtedly becomes a better physician thereby. He makes medical progress, and by reason of his advanced knowledge shortens disease and lowers the mortality rate. To neglect these opportunities, then, is little less than criminal.

Selfish, indeed, is the physician who will regularly attend the sessions of his societies and not contribute to the general edification. He must do his share, if not by a formal part in the program, at least by occasional discussions of the essays presented. The very nature of the physician's duties leads him away from public speaking;

the platform is foreign to his daily walk and has terrors for the modest doctor. In order that he may do his part in the medical society, it is necessary that the embryo physician be given some training in public speaking and become accustomed to formulating his ideas and clothing them in such language as will give him the ear of a willing audience.

With this in mind, the Senior Class is organized as "The Homœopathic Medical Society of the University of Michigan." It meets for one hour every Thursday morning to listen to one paper. At the opening of the year each student is assigned a topic, covering some portion of the work in nose or throat disease, for a fifteen or twenty minute address. At the opening of the society meeting the speaker is introduced and presents the formal thesis. The rest of the hour, except the last ten minutes, is taken up by short discussions, participated in by each member of the class. The essayist answers questions, which may be put to him, and formally closes the discussion. The instructor then criticizes the work and adds his own views to those already presented.

This hour is looked forward to and is thoroughly enjoyed by every student. The papers are strikingly original and frequently give evidence of an immense amount of study and research. The discussions, while earnest and even pointed, are helpful and suggestive.

As the year passes, every student gives evidence of improvement. He is more ready of expression and shows greater mental freedom when upon his feet. The practice must be helpful to the future practitioner, who has been taught thus early the importance of medical societies and made familiar with the methods of such organizations. Likewise he becomes thoroughly grounded in the theory and practice of rhinology and laryngology.

The number of hours given to these branches is 60 for class-room and 160 for clinic.

MEDICAL JURISPRUDENCE

The course in forensic medicine comes during the last semester of the senior year. The Dean of the Department of Law lectures to the joint classes of the law and medical departments upon the legal questions and relations appertaining to the practice of medicine and surgery. His lectures are given in the law building of the University. The lectures upon the Code of Medical Ethics are given in the lecture room of the hospital by the Dean of this department.

MENTAL AND NERVOUS DISEASES

A special course on mental diseases is given every year by Dr. Oscar R. Long, Superintendent of the State Asylum at Ionia.

In the hospital there is abundant material for a thorough clinical course in Nervous Diseases. Professor Dewey holds a clinic in this department every Thursday afternoon. He also gives a course of lectures upon the subject.

Dr. W. A. Polglase, Superintendent of the Michigan Home for the Feeble-Minded, is one of the lecturers in this department.

DERMATOLOGY

The course in Dermatology consists of lectures, quizzes and a weekly clinic which is well patronized. Photographic, lithographic, and stereopticon plates are used in the differential demonstrations. Particular attention is given to diagnosis. The student is taught the distinguishing features between cases presented and other simulating conditions.

The department is well equipped with the latest Roetgen Ray and other electrical appliances, and practical instruction is given in their general and special adaptability to the treatment of malignant diseases of the skin.

TOXICOLOGY

The Director of the Pathogenetic and Pathological Laboratory give a course in toxicology and allied subjects. The antidotal treatment of poisons and the medico-legal aspects of the subject comes under this head. The course occupies two hours a week during one semester.

DEMONSTRATION COURSES IN THE SPECIALTIES

In the limited space of a college announcement it is impossible to enlarge upon all the good features of the school. It is the aim of this Faculty to give the student, not glittering generalities in medicine, but specific instruction in each branch of the science and art of practice.

As previously pointed out, before graduation each student is required to do actual work in demonstrating his medical and surgical skill.

By operation upon the cadaver and upon animals; by manipulation of manikins and models; by actual dressings of wounds and bandaging; by thorough drill in the uses of the ophthalmoscope, the laryngoscope, the test case and spectacle fitting; by the use of the microscope and spectroscope; by the making of tinctures and dilutions; by bedside demonstrations and examinations; by actual diagnosing and prescribing—these are the methods by which the students become practical and prepared to make successful physicians.

The classes are divided into sections, so that in turn each individual has his share of actual work.

All these demonstration courses are given without extra expense. In most colleges a fee is required in each of half a dozen specialties, but it has been decided to give this work without charge. Also, students assist at operations and take turns in ward visiting. It is believed that the advantages offered for the practical application of

theoretical knowledge are unsurpassed in this country. Students come in personal contact with the members of the Faculty, and profit accordingly.

CLINICAL COURSE FOR PRACTITIONERS

For a number of years the Department has offered the profession an annual clinical course. This course has been very popular and several hundred physicians have profited by it. A time is chosen either in the autumn or spring when physicians can be spared from home. Solid clinical work for five days illustrates all the new medical and surgical methods. The evenings are devoted to lectures by members of the Faculty or visiting physicians. Members of faculties of other colleges in the country as well as other distinguished members of the profession are employed to assist by giving lectures and holding clinics. This affords the students, as well as the practitioners, an unusual opportunity.

No fee is charged for this course of thirty-two hours of actual lecture-room and amphitheatre instruction. In connection with it and continuing two weeks is a post-graduate course of lectures, demonstrations and conferences for which a fee of ten dollars is charged. This fee admits to the Practitioners' Laboratory Course described below and carried on in connection with the clinical course, the hours being arranged so that there will be no conflict in time.

PRACTITIONERS' LABORATORY COURSE

There has always been a call for a short, systematic, practical course of instruction in every-day laboratory work adapted to the needs of those in general, busy practice. The course is given in connection with the Clinical Course for Practitioners, continuing two weeks. Especial

attention is given to the practical methods of examining sputum, urine, blood and stomach contents. Those who contemplate taking this course should apply to the Director of the Clinical Laboratory, Homœopathic Hospital, in ample time so that microscopes, material and desk-room may be provided. The laboratory in which this course is given is in the Hospital Building.

POST-GRADUATE INSTRUCTION

Every encouragement is offered graduates who desire special privileges for study. Medical science has made such rapid progress during recent years that graduates of a short time ago feel the necessity of returning to the medical centers for further light in the modern advances. The great laboratories and special courses of this college offer superior advantages to graduates. Any physician desiring to avail himself of the privileges here offered should correspond with the Dean.

COMBINED COURSE IN COLLEGIATE AND MEDICAL STUDIES

One hundred and twenty hours of work are required for graduation in the Literary Department of the University. The subjects included in the first two years of the curriculum of the Homœopathic Department are all provided for in the courses of instruction given in the Literary Department. The character and the extent of the instruction in these subjects are not, however, in all cases identical in the two departments. The following scheme is, therefore, given to show which of the courses offered in the Homœopathic Department are accepted in the Department of Literature, Science, and the Arts, as covering the requirements in the corresponding course given in that department.

FIRST YEAR

Medical Courses.	*Literary Courses.*
Anatomy and Osteology,	Human Anatomy: Courses 1, 2, 3, 5.*
General Chemistry,	General Chemistry: Courses 1, 2.
Organic Chemistry,	Organic Chemistry: Course 28.
Laboratory Chemistry,	Analytical Chemistry: Course 3.
Physics,	Physics: Course 1.
Bacteriology,	Bacteriology: Courses 2, 3.
Histology.	Zoology: Course 6 or 7.

SECOND YEAR

Medical Courses.	*Literary Courses.*
Anatomy,	Human Anatomy: Courses 4, 6.
Physiology,	Physiology: Courses 1, 2.
Hygiene,	Hygiene: Courses 1, 1*a*.
Embryology,	Zoology: Course 9.
Physiological Chemistry.	Physiological Chemistry: Courses 6, 7.

A student who intends to pursue the study of medicine in the Homœopathic Medical College and at the same time to gain his A.B. degree, may shorten his total period of residence at the University by electing, as an undergraduate, the courses above named; the precise amount of time gained depending upon the amount of literary work he may be able to complete. If he wishes to arrange his work in such a way as to earn the two degrees in six years of study, he must complete all of the above-named accepted courses before taking his first degree; and he must also make his intention known to the proper authorities as early as the beginning of his third year of undergraduate work, and obtain special permission to be registered as a student in the combined course.

*Course 4 in Zoology is accepted in place of Human Anatomy 1; and Course 8 in Zoology is accepted in place of Human Anatomy 2 and 3.

Students who wish to take advantage of the opportunity here offered for combined collegiate and medical work should consult frequently after the first year with a committee appointed to consider questions arising in this connection. This committee at present consists of Professors HINSDALE and COPELAND.

A student who aims to earn two degrees, Bachelor of Science and Doctor of Medicine, in six years will find it necessary to arrange his studies with this end in view from the beginning of his first year of residence at the University. The amount of work prescribed for the two degrees is sufficient to fill nearly all the student's time, leaving only a small number of hours free for electives. To enable such a student to plan his work intelligently and systematically, a scheme of study covering four years is here given. The scheme does not represent a complete prescribed course, nor the only course possible, but it is intended to show an order in which the prescribed studies may be taken to advantage. Some elective work in addition will be needed to satisfy the requirements for the bachelor's degree.

FIRST YEAR

First Semester: French, four hours; German, four hours; English, two hours; Mathematics, three hours; General Chemistry, three hours.

Second Semester: French or German, four hours; Mathematics, four hours; Physics, five hours; General Chemistry, three hours.

SECOND YEAR

First Semester: English, two hours; Analytical Chemistry, five hours; General Biology, five hours; Bacteriology, three hours.

Second Semester: Organic Chemistry, four hours; Zoology, three hours; Bacteriology, five hours.

THIRD YEAR

Italics indicate medical courses.

First Semester: Hygiene, three hours; *Osteology* (Human Anatomy, two hours; or Zoology, five hours); *Embryology* (Zoology, six hours; or the medical course in *Embryology,* for which, however, no credit is given toward the degree of Bachelor of Arts); *General Anatomy* (Human Anatomy, two hours; to be omitted, if Zoology is taken in second semester).

Second Semester: Hygiene, two hours; *Histology* (Zoology, five hours); *General Anatomy* (Human Anatomy, two hours; or in place of Human Anatomy, Zoology, six hours).

FOURTH YEAR

First Semester: Physiological Chemistry, five hours; Human Anatomy, two hours; *Practical Anatomy* (Human Anatomy, four hours); Physiology, five hours.

Second Semester: Physiological Chemistry, three hours; *Practical Anatomy* (Human Anatomy, four hours), five hours; Physiology, five hours.

EXAMINATIONS AND PROMOTIONS

At the end of each semester, examinations (written, oral, or both written and oral) are held on all subjects taught during the semester, and each student's grade is entered upon the record of the Faculty. Students *"conditioned"* cannot apply for another examination in the same subject until the close of the next course or semester, except that a student conditioned at the close of the college year may ask for another examination in the first two weeks of the following year. Students reported *"not passed"* are required to take the course over again before applying for another examination.

No student can be admitted to the senior class who has not passed all his work of the freshman and sophomore years.

REQUIREMENTS FOR GRADUATION

To be admitted to the degree of Doctor of Medicine, a student must be twenty-one years of age, and possess a good moral character. He must have completed the required course in laboratory work, and have passed satisfactory examinations on all the required studies included in the full course of instruction. He must have been engaged in the study of medicine for the period of four years, the last of which must have been in this college. He must have presented a thesis showing a satisfactory amount of original research along medical, or closely related scientific lines.

HOUSE PHYSICIANS

Two House Physicians to the University Hospital Homœopathic are appointed each year.

The appointments are usually made from among the members of the graduating class.

CLINICAL ASSISTANTS

Each member of the Faculty belonging to the clinical staff appoints each session a senior student to act as his clinical clerk, whose duty it is to conduct the reporting of all cases under treatment. The holding of one of these positions is found to be of very great practical utility to the student.

OTHER FACILITIES FOR INSTRUCTION

LIBRARY

The best idea of the magnitude of the University Library, which is made up of books upon general knowledge and those upon special subjects, including medicine, law, dentistry, literature, etc., can be obtained from the following statements taken from the University Librarian's report:

Total number of volumes, 212,020; number of volumes upon medical subjects, 18,208, of which over 3,000 are upon exclusively Homœopathic medicine. In the periodical room there are regularly taken 1,148 journals, 286 of which are medical, 45 being Homœopathic publications. A liberal annual appropriation is made by the Board of Regents for the purchase of books by the Homœopathic Faculty.

With the large collection of literature already accmulated and this appropriation, the library committee, Professor Dewey, is able to keep the library in fine working condition. The library building is one of the finest structures of the University. In it are housed the Medical libraries as well as the libraries of the other departments. The building is open from 8 A. M. to 10 P. M., Sundays excepted. Students are encouraged to do all the reading possible, and usually repair to the library when having cases to look up, or reports and papers to compile.

MUSEUMS

There are ample collections of plants, a botanical garden, photographs, models, specimens, preparations, apparatus, and instruments for illustrating the different studies embraced in the course. Additions are made from time to time to these collections, so that the members of the Faculty are able to adopt every new method of illustration, and to exhibit to the classes each year all import-

ant improvements in the way of instruments and apparatus that are employed in the practice of medicine and surgery, and to show their application.

The following paragraphs may serve to indicate the extent of some of these collections.

MUSEUM OF ANATOMY

The museums of the late Professors FORD and SAGER, embracing several thousand specimens, the result of many years' labor in collecting and preparing materials intended to aid directly in teaching, are now the property of the University, and are used in the daily work of the class rooms. These museums contain a valuable collection of bones, illustrating healthy, as well as diseased, conditions, the various changes that occur from infancy to old age, and the processes of first and second dentition; dissections, general and partial, of the vascular, nervous, and muscular system, both normal and abnormal; models of various portions of the body in wax, papier-maché and plaster, illustrating morbid growths, skin diseases, etc.; preparations in the comparative embryology, neurology, and craniology of the vertebrate; in human embryology; in the anatomy and pathology of the diseases of women, etc. The collection of monstrosities, both single and double, of man and of the lower animals, is one of the largest in the United States.

NATURAL HISTORY MUSEUM

Besides having access to the botanical, zoological and geological cabinets of the University, estimated to contain over 300,000 specimens, the Natural History Museum, occupying a fine building in the southeast corner of the campus, is open daily. This building is filled with specimens from all parts of the world, illustrating nearly every type of life. It contains also collections illustrative of man's handicraft through all stages of culture.

FACILITIES FOR PHYSICAL CULTURE

There are two magnificent gymnasiums upon the University campus; one the Waterman Gymnasium for men, the other the Barbour Gymnasium for women. Each is under the control of a physical director. The main floor of each is about 150 by 90 feet. They are well supplied with the various kinds of apparatus usually found in the best modern gymnasium. A number of smaller rooms are devoted to fencing, boxing and other special purposes, while the basements are given up to swimming pools, baths of various kinds, lockers, etc. The main halls are lighted in the daytime by means of a large sky-light 60 feet above the floor, and in the evening by electricity. In the Waterman Gymnasium a gallery makes room for an elliptical running track, 375 feet in length.

In the conduct of the gymnasiums the aim is not so much the development of a few gymnastic experts as the provision of wholesome physical exercise for the many. Thus far the work has been voluntary. The facilities of the building, including physical examinations and instruction, are free to all students, the only charge being a rental of $2 a year for a locker.

Athletics.—A level field of thirty acres, owned by the University and situated a few minutes' walk southward from the campus, has been equipped for every kind of out-of-door sport. Here are the base ball grounds, the foot ball grounds, etc. The field is so laid out that a number of these games may be in progress at the same time and abundance of room left for all kinds of other exercises. On the campus there is a number of tennis courts.

The general supervision of athletic sports is vested in a committee of nine, consisting of five professors elected annually by the University Senate, and four students chosen by the Students' Athletic Association. The Board

of Control thus constituted has charge of all matters involving the relation of athletic sports to the University; for example, the eligibility of players proposed for any University team, the arrangement of intercollegiate games, the granting of leave of absence, the investigation of charges of misconduct on the part of players. The policy of the Board is to foster the spirit of honor and gentlemanliness in athletics, to suppress evil tendencies, and to see to it that play shall not encroach too much upon the claims of work. For the furtherance of these ends certain specific rules and regulations have been adopted, a copy of which can be had on application to the Secretary of the University.

Other Facilities.—Students in the Homœopathic College have the privilege of attending the scientific and philosophical lectures collateral to medicine, given in the Department of Literature, Science, and the Arts.

AIDS TO MORAL AND RELIGIOUS CULTURE

The Students' Christian Association, which has a large membership, holds stated meetings for religious and for social improvement. Through the enterprising efforts of the Association and the benevolence of those interested in its aims, a spacious and beautiful building, called Newberry Hall, has been erected for its use opposite the University Campus. Another building for men, containing all the modern club features, is located a short distance from the campus. Both these buildings are managed by the Christian Association.

The churches of the city of Ann Arbor are cordially thrown open to the students, whose interests are largely consulted by the pastors in their pulpit instruction and in their plans of work. There are churches of the following communions in the city: Baptist, Congregationalist, the Disciples, German Lutheran, German Methodist, Metho-

dist Episcopal, Presbyterian, Protestant Episcopal, Roman Catholic, and Unitarian.

Guilds, and other societies, consisting chiefly of students, have been organized in several of the churches, both for religious and moral culture and for social entertainment. The Hobart Guild, connected with St. Andrews Church (Protestant Episcopal), has a commodious building, called Harris Hall, planned and equipped for the objects of the Guild; and two of the several lectureships contemplated in its plans have been endowed—the Baldwin Lectures for the Establishment and Defense of Christian Truth, and the Charlotte Wood Slocum Lectureship on Christian Evidences. The Tappan Presbyterian Association owns the building known as McMillan Hall; it has a theological library of several thousand volumes, and maintains annual courses of lectures upon church history and church work. The Methodist Episcopal Church has organized the Wesleyan Guild, and has a permanent fund for the support of the Henry M. Loud Lectureship; each college year five or six lectures on living topics are given by eminent men. Unity Club is a society formed by the Unitarian Church with similar purposes. The Foley Guild is an organization of Roman Catholic students under the patronage of the Rt. Reverend John S. Foley, bishop of the diocese. The society organized with the Church of the Disciples is called the Inland League.

UNIVERSITY ORGANIZATIONS

Lecture Association.—The Students' Lecture Association provides each year, at a low price for admission, an attractive series of lectures and musical entertainments.

Choral Union.—The Choral Union is an organization of students and others, for the study and practice of choral music under the direction of the Professor of

Music in the University, and for the promotion of general musical culture. Under its auspices, and with the co-operation of the University Musical Society, a series of concerts is given each year, and in the spring the May Festival.

The Columbian Exposition Organ, which was purchased for the University and is now known as the Frieze Memorial Organ, in memory of the late Professor Henry Simmons Frieze, is used in this course of concerts.

Other Organizations.—Several organizations of University officers and students are maintained for the reading of papers and the holding of conferences on topics of interest that do not fall within the scope of ordinary classroom work; and some of them also aim to secure each year speakers of prominence to give public addresses on subjects germain to the purpose of the organization.

The students of the Department of Law arrange annually for a celebration of Washington's birthday.

TRAINING SCHOOL FOR NURSES

In connection with the Hospital there is a training school for nurses under the charge of a competent and experienced principal. The term of study and service extends through three years, at the expiration of which time those who have reached the required standard are granted certificates of graduation, signed by the President and Secretary of the University.

Instruction in the theory and practice of modern nursing is given by a faculty of physicians and graduate nurses.

Applicants for admission must be of high character, good health, and high-school education.

During the three years' training, instruction is given in the following branches: Hygiene, Medical Lectures, Surgical Lectures, Gynæcological Lectures, Eye and Ear

Lectures, Nose and Throat Lectures, Obstetrical Lectures, Diseases of Children, Electrotherapeutics, Physiological Chemistry, Massage, Nervous and Mental Diseases, Diseases of the Skin, Practical Dietetics, Bacteriology, Theory and Practice of Nursing.

For further information about the school application may be made to the Dean of the Training School Faculty, Dr. ROYAL S. COPELAND.

THE UNIVERSITY HOMŒOPATHIC OBSERVER

There is issued from the College office a periodical edited under supervision of the Faculty, *The University Homoeopathic Observer.* The Observer is a bulletin of the College, setting forth the work done by the Department in such form as will interest the profession at large. There is always an abundance of material being produced in a well-equipped and well-conducted college and hospital that deserves permanent record. This periodical is intended to serve such purpose.

ALUMNI ASSOCIATION

The society meets annually on the day preceding the commencement exercises of the University. It is very desirable that every graduate of the College should enroll himself a member of the society. A cordial invitation is extended to every alumnus of the College to be present at the next meeting of the Association. The officers of the Association are: President, J. M. Lee, M.D., Rochester, N. Y.; Vice-President, E. A. Clark, M.D., Ann Arbor; Secretary, N. H. Chamberlain, M.D., Sonora, Tuolumne Co., Cal.; treasurer, F. J. Peck, M.D., Ansonia, Conn.

FEES AND EXPENSES

Matriculation Fee.—For Michigan students, *ten dollars;* for all others, *twenty-five dollars.*

Annual Fee.—For Michigan students, *forty-five dollars;* for all others, *fifty-five dollars.*

Diploma or Graduation Fee.—For all alike, *ten dollars.*

Laboratory Expenses.—In the laboratories, the fees for which are given in the following table, the student pays for the material used, and the expense varies somewhat with the care and economy practiced:—

LABORATORY FEES.

Anatomy	$20 00
Chemistry	15 00
Bacteriology	15 00
Physiological Chemistry	15 00
Histology	7 00
Pathology	10 00

The total amount of fees paid the University during the whole four years' course for matriculation, material used, incidental expenses and diploma, is, for Michigan students, about $285, and, for others, about $340, varying a little with the student's actual laboratory expenses.

The matriculation fee and the annual fee must be paid in advance. No portion of the fees can be refunded except by order of the Board of Regents, to students who leave the University during the academic year.

Other Expenses.—Students obtain board and lodging in private families for from three to five dollars a week. Clubs are also formed, in which the cost of board is from one dollar and a half to two dollars and a half a week. Room rent varies from seventy-five cents to two dollars a week for each student. There are no dormitories and no

commons connected with the University. The University does not undertake to furnish manual labor to students; yet many find opportunities in the city for remunerative work, the Students' Christian Association being very helpful in this direction. Students on arriving in Ann Arbor can obtain information in regard to rooms and board by calling at the College office.

FURTHER PARTICULARS

Students arriving in Ann Arbor, and desiring further information, should apply at the office of the Faculty, in the Homœopathic College, North University Avenue. The office will be open daily during the latter part of September, and members of the Faculty, or some one who can give information, will be in attendance.

All letters of inquiry should be addressed to the Secretary, Dr. Royal S. Copeland, Ann Arbor, Michigan, or Dr. W. B. Hinsdale, Dean.

FACTS ABOUT ANN ARBOR

Estimated Population	20,000
Area of City	5 Square Miles
Streets	45 Miles
Sewers	28 Miles
Cement Sidewalks	32 Miles
Street Lights	235
Electric Roads	2
Public Parks	5
Steam Railways	2
Interurban Electric Railways	1
Passenger Trains Daily	22
Water Works Water Mains	46 Miles
Number of Telephones in Use	2,860
University of Michigan Hospital (Homœopathic)	125 Beds
University of Michigan Hospital ("Regular")	225 Beds

Public School Buildings	7
Students in Public Schools	2,400
Number of Students in University	4,571
Valuation of University	$2,250,000
Number of Churches	14
Number of Y. M. C. A.s and Y. W. C. A.s, each	2
Daily Papers	4
Other Papers	4
Firemen	18
Fire Stations	2
Policemen	7
Banks	5
Distance from Chicago	256 Miles
Distance from Toledo	48 Miles
Distance from Detroit	38 Miles

FACTS ABOUT THE COLLEGE

I. It is a part of a University with the broadening influence derived from contact with students coming from every section of our country and pursuing different lines of study.

II. The scientific preliminary instruction is the most thorough in America.

III. The instruction in pure Homœopathic medicine and surgery is given by experts who devote almost their entire time to college duties and who come in personal contact with every student.

IV. The College has a fine new hospital with capacity of a hundred twenty-five beds, all for clinical work. Clinical and bed-side teaching is the main feature of the curriculum.

V. Clinical cases are sent to the hospital from every county in Michigan and from many adjoining states, thus affording a wide range and variety of material.

VI. Cases are assigned for daily treatment and other

professional services to students who administer anæsthetics and assist at all operations.

VII. The medical library contains more volumes than are possessed by any other Homœopathic college.

VIII. Fees and expenses are lower than in larger cities.

IX. Public entertainments for the benefit of the University community are of high quality; the best musical and platform talent of the world coming to Ann Arbor.

X. The standard of qualification for admission is a guarantee that the quality of students is the best.

STUDENTS

GRADUATES OF 1905

NAME	RESIDENCE
Harold Hill Baker	*Rochester, N. Y.*
M. Andrews Bunker	*Oberlin, O.*
Bertha Anne Davis	*Flint*
Alexander Sanders DeWitt	*Hart*
Minnetta Celina Flinn	*Wabash, Ind.*
Lewis Edward Inman	*Oklahoma City, Okla.*
Ethel May Knisely	*Barberton, O.*
Helen Lee, A.B.	*Bangor, Me.*
Harlen MacMullen	*Bay City*
William Frank Maxwell	*Cardington, O.*
Llewella Maria Merrow	*Norridgewock, Me.*
Henry Clyde Telford	*Emington, Ill.*
William George Weideman	*West Bay City*

FOURTH YEAR STUDENTS

NAME	RESIDENCE
Neil Isaac Bentley, A.B.	*Ann Arbor*
Frank Winne Brown	*East Syracuse, N. Y.*
Melvin Elwell Chandler	*Greenville*
Leo Josephus Crum	*Owosso*
Neil Goodrich	*Ganges*
Hans Peter Gotfredsen	*Manistee*
Albert Euclid Hinsdale	*Ann Arbor*
Clarence Ludlam Hyde	*Buffalo, N. Y.*
Seth Harold Jones	*Lansing*
Howard Bligh Kinyon	*Ann Arbor*
Mabel Hannah Knapp	*Buffalo, N. Y.*
Ethel May Knisely	*Barberton, O.*
Alfred Eddward Athelstan Mummery	*Ann Arbor*
John Walter Orr	*Morristown, N. J.*
John Albert Reese	*Eau Claire*
Archer Leroy Smethers	*York, Pa.*
William Howard Smith, B.S., *Michigan Agricultural College*	*Cedar Springs*
Montgomery Alexander Stuart	*Detroit*
Augusta Genevieve White, B.S., *Bucknell University*	*Bradford, Pa.*

THIRD YEAR STUDENTS

NAME	RESIDENCE
Charles Barton	*Toledo, O.*
Hugh McDowell Beebe	*Sidney, O.*
Edward Bulger Chapman	*East Syracuse, N. Y.*
Ezra L. Covey	*Homer*

James Arthur Elson	*Albion, N. Y.*
Rhoda Pamela Farquharson, A.B.	*Detroit*
Walter Bertram Gerhard	*Ann Arbor*
Clarence Gillette	*Niles*
Ford Nelson Jones	*Detroit*
Anna Bell Lefler	*Centralia, Ill.*
Charles Irving Newton	*Geneseo, N. Y.*
Elmer Ewell Owen	*Warsaw, N. Y.*
Philo Henry Pease	*Chardon, O.*
John Clarence Smith, A.B.	*Ann Arbor*
Griffith Edward Thomas	*Scranton, Pa.*
Charles Carroll Waggoner	*Corry, Pa.*
Frank Weidman	*Battle Creek*
William Raymond Williamson	*Utica, N. Y.*
Oliver Bernard Zeinert	*Baldwin, Mo.*

SECOND YEAR STUDENTS

NAME	RESIDENCE
Winifred Adams	*Kansas City, Mo.*
Charles Sherre Ballard	*Grand Rapids*
Estel Thorton Becks	*Ann Arbor*
Eleanor Louise Campagnac	*Melksham, England*
Ralph Emerson Case	*Pittsburg, Pa.*
Clarence Harvard Mead	*Mount Pleasant*
Joseph Harry Stonhouse	*Escanaba*
Zoena M. Sutton	*Tonawanda, N. Y.*
Walter Earl Watkins	*Ann Arbor*
Rupert Kimmel Welliver	*Dayton, O.*
William Harold Wetmore	*Oswego, N. Y.*
Homer Smith Wilson, B.S., *Grove City College*	*Grove City, Pa.*

FIRST YEAR STUDENTS

NAME	RESIDENCE
Irwin Henry Boesel	*New Bremen, O.*
Samuel Gordon Brooks	*Honeoye Falls, N. Y.*
Karl Bernard Brucker	*Lansing*
Floyd Hamilton Bussey	*Adrian*
Corwin Stanton Clarke	*Fairbury, Neb.*
John Redman Claypool	*Mount Vernon, O.*
Lawrence Love Dill	*Lucerne, Ind.*
Moses Raymond Dillon	*Ann Arbor*
Emma Elizabeth Ernst	*Greenville, Pa.*
Jacob Faltermayer	*Niederhausen, Germany*
Zina Leslie Gilding	*Ann Arbor*
James Burnham Griffin	*Detroit*
Willard Hastings	*Fairmount, Ind.*

James Albert Jackson	*Wabash, Ind.*
Frank Hiram Lister	*Buchanan*
Ralph Robertson Mellon, B.S., *Grove City College*	*Springdale, Pa.*
William O. Merrill	*Mears*
Frank Luding Moore	*Fremont, O.*
Jacob Moore	*Ionia*
Erwin Hare Mudge	*Buffalo, N. Y.*
Allen Paton Olmstead	*Geneva, N. Y.*
Ernest Alfred Purnell	*West Chicago, Ill.*
Alice Mary Ridge	*Beresford, S. Dak.*
Ralph William Ridge	*Beresford, S. Dak.*
Perry Christian Robertson	*Lansing*
Henry Charles Senke	*Rochester, N. Y.*
Ansel Brooks Smith	*Ann Arbor*
Earl Amzie Stickle	*Newark, O.*
Florence Aurthreholt Stone	*Jackson*
Allen Vincent Walker	*West Henrietta, N. Y.*
Clarence Howarth White	*Perry, N. Y.*
William Udney Wolcott	*Menominee*
Theron Grover Yeomans	*Walworth, N. Y.*

RECOMMENDATION FOR ADMISSION TO THE HOMOEOPATHIC DEPART... OF MICH...

Therapeutics				
Total Elective	5	25	6	

RECOMMENDATION FOR ADMISSION TO THE HOMOEOPATHIC DEPARTMENT OF MICHIGAN

This certifies that .....
(name of candidate)

graduated from .....
(name of school)

on the ..... day of .....
is of good moral character and earned the units or counts written in the accompanying blank.

(For method of reckoning "units" and "counts" see Announcement, page 28)

ACADEMIC (SECONDARY) WORK AND EXAMINATIONS

12 Major Units (60 Counts) or 15 Minor Units (60 Counts)

REQUIRED GROUP—Minimum 7 Major Units (35 Counts) or 9 Minor Units (36 Counts)

(The credits of the applicant should be filled in these spaces)

STUDIES	Major Units (5 recitations weekly)	Counts (recitations per week)	Minor Units (4 recitations weekly)	Counts (recitations per week)	Credit			Text Books
					Major Units	Minor Units	Counts	
English	2	10	3	12				
Mathematics	2	10	3	12				
Latin	2	10	2	12				
Physics	1	5	1	4				
Total Required	7	35	9	36				
ELECTIVE GROUP—Maximum 5 Major Units (25 Counts) or 6 Minor Units (24 Counts								
Greek	2	10	2	8				
French	2	10	2	8				
German	2	10	2	8				
Spanish	1	5	1	4				
History	2	10	2	8				
English Literature	1	5	1	4				
Chemistry	1	5	1	4				
Botany	½	2.5	½	2				
Zoology	½	2.5	½	2				
Biology	1	5	1	4				
Physiology and Hygiene	½	2.5	½	2				
Physical Geography	½	2.5	½	2				
Trigonometry	½	2.5	½	2				
Drawing	½	2.5	½	2				

The University Bulletin is Issued by the University of Michigan as Often as Every Six Weeks During the University Year.

Entered as Second-Class Matter at the Postoffice at Ann Arbor, Michigan.

The Bulletin Includes the Following Publications:—

The Annual Report of the President.

The Calendar of the University.

The Annual Announcements of the Department of Literature, Science, and the Arts, the Graduate School, the Departments of Engineering, of Medicine and Surgery, and of Law, the School of Pharmacy, the Homœopathic Medical College, the College of Dental Surgery, and the Summer Session.

Other Announcements of the several departments of instruction. Reports of University officers, etc.

Ann Arbor Plant
The Richmond & Backus Co.
Printers

UNIVERSITY BULLETIN

NEW SERIES, VOL. VIII, NO. 16. JULY, 1907.

UNIVERSITY OF MICHIGAN

Homoeopathic Medical College

THIRTY-THIRD
ANNUAL ANNOUNCEMENT
1907-1908

Ann Arbor
PUBLISHED BY THE UNIVERSITY
1907

THIRTY-THIRD

ANNUAL ANNOUNCEMENT

OF THE

Homœopathic Medical College

OF THE

UNIVERSITY OF MICHIGAN

1907-1908

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1907


ANN ARBOR
PLANT
THE EDWARDS BROTHERS INC.
PRINTERS

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PRESIDENT

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HON. LOYAL E. KNAPPEN,	*Grand Rapids,*	" 1911
HON. PETER WHITE,	*Marquette,*	" 1911
HON. ARTHUR HILL,	*Saginaw,*	" 1913
HON. WALTER H. SAWYER,	*Hillsdale,*	" 1913

JAMES H. WADE,
SECRETARY

HARRISON SOULE,
TREASURER

HON. LUTHER L. WRIGHT,
SUPERINTENDENT OF PUBLIC INSTRUCTION
(Office at Lansing)

1907

JANUARY

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FEBRUARY

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MARCH

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JULY

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1908

JANUARY

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MARCH

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JUNE

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OCTOBER

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NOVEMBER

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DECEMBER

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CALENDAR

OF THE

HOMŒOPATHIC MEDICAL COLLEGE

1907-1908

1907.

Sept. 23. *Enrollment of Studies in the Homœopathic Department.*

Sept. 24. FIRST SEMESTER BEGINS IN ALL DEPARTMENTS OF THE UNIVERSITY.

Nov. —. Thanksgiving Recess of four days, begins in all Departments of the University.

Dec. 20. Holiday Vacation begins in all Departments.

1908.

Jan. 7. Exercises resumed.

Feb. 7. FIRST SEMESTER CLOSES.

Feb. 10. SECOND SEMESTER BEGINS.

April 10. (Evening) Recess begins, ending April 20 (evening).

June 18. COMMENCEMENT.

INSTRUCTION IS GIVEN THE STUDENTS

OF THE

HOMŒOPATHIC MEDICAL COLLEGE

BY THE FOLLOWING

Members of the University Faculties

WILBERT B. HINSDALE, A.M., M.D., Professor of Theory and Practice of Medicine and Clinical Medicine.

ROYAL S. COPELAND, A.M., M.D., Professor of Ophthalmology, Otology, and Laryngology.

WILLIS A. DEWEY, M.D., Professor of Materia Medica and Therapeutics and Clinical Professor of Nervous Diseases.

CLAUDIUS B. KINYON, M.D., Professor of Gynæcology and Obstetrics.

DEAN T. SMITH, B.Sc., M.D., Professor of Surgery and Clinical Surgery.

OSCAR R. LONG, M.D., Lecturer on Mental Diseases.

WILLIAM A. POLGLASE, M.D., Lecturer on Nervous Diseases.

ROLLIN H. STEVENS, M.D., Lecturer on Dermatology.

CLAUDE A. BURRETT, PH.B., M.D., Director of Pathogenetic and Pathological Laboratories.

VICTOR C. VAUGHAN, PH.D., M.D., Professor of Hygiene and Physiological Chemistry.

OTIS C. JOHNSON, A.M., PH.C., Professor of Analytical Chemistry.

WARREN P. LOMBARD, A.B., M.D., Professor of Physiology.

J. PLAYFAIR McMURRICH, A.M., PH.D., Professor of Anatomy.

HARRY B. HUTCHINS, LL.D., Professor of Medical Jurisprudence.

FREDERICK G. NOVY, Sc.D., M.D., Professor of Bacteriology.
ALFRED S. WARTHIN, PH.D., M.D., Professor of Pathology.
GOTTHELF C. HUBER, M.D., Junior Professor of Anatomy.
JOHN O. REED, PH.D., Junior Professor of Physics.
MOSES GOMBERG, Sc.D., Assistant Professor of Organic Chemistry.
SIMON M. YUTZY, M.D., Instructor in Anatomy.
NEIL I. BENTLEY, A.B., M.D., Assistant to the Professor of Ophthalmology, Otology, and Laryngology.
MELVIN E. CHANDLER, M.D., House Physician.
ARCHER L. SMETHERS, M.D., House Physician.
MYRTA WOODSEN, In Charge of Training School for Nurses.
RUSSEL E. ATCHISON, M.D., Superintendent Hospital.

Officers of the Faculty

JAMES B. ANGELL, LL.D., PRESIDENT.
WILBERT B. HINSDALE, A.M., M.D., DEAN.
ROYAL S. COPELAND, A.M., M.D., SECRETARY.

Homœopathic Medical College

OF THE

UNIVERSITY OF MICHIGAN

It is a yearly custom of medical colleges to prepare announcements, setting forth their advantages, privileges, and courses of study.

In enumerating the special features of this Homœopathic Medical College the first point of advantage noticed is that it is a department of a great State University.

The University of Michigan

The University of Michigan is the largest State University in the United States, and, with a single exception, the most largely attended institution of learning in America. Last year its student body numbered 4,746 persons, representing every state in the Union and almost every foreign country.

The University of Michigan is a part of the public educational system of the state. In accordance with the law, the aim is to complete and crown the work begun in the public schools, by furnishing ample facilities for liberal education in literature, science, and the arts, and for thorough professional study of medicine, engineering, pharmacy, law, dentistry, forestry, etc.

Through the aid that has been received from the United States and from the state it is enabled to offer privileges, with only moderate charges, to all persons of either sex, who are qualified for admission. While Michigan has endowed the University primarily for the higher education of her own sons and daughters, it must be understood that she also opens the doors of the institution to all students, wherever their homes. It is in this broad, generous, and hospitable spirit that the University has been founded, and that it endeavors to do its work.

To a student selecting a place for the study of medicine, the advantages of residence in a university city must be apparent. Contact with university life and association with students in other lines of thought are in themselves educational. Acquaintances and friendships are formed which will prove of lifetime value and pleasure. Through

friends made in college, many a young doctor has been lead to a favorable location for the practice of his profession. Naturally, most of the associates and friends of the physician's life will be outside his own profession. The culture acquired by a four years' residence in the University atmosphere will widen the influence and usefulness of the physician who takes his degree from this Homœopathic Department.

LABORATORY METHODS

One of the great advantages offered by this college is that the fundamentals of medicine are taught by specialists. During the past few years the teaching of medicine has changed radically. The medical college of twenty years ago consisted mainly of a hospital, with what at this time would be regarded as a very indifferent equipment, and a dissecting room. While ample hospital facilities with all the various equipments that skill and ingenuity are devising, and the study of the grosser parts of the anatomy are essential to a medical and surgical training, the laboratory in its modern development has shown the medical man avenues of entrance into the innermost recesses of life.

The diagnostician is no longer checked by the cutaneous covering of the body. The microscope, test tube, fluroscope, spectroscope, ophthalmoscope, stethoscope, and other modern or improved appliances make it possible to interpret the heretofore hidden mysteries and penetrate somewhat the inner parts of the human body. No longer obliged to draw all his conclusions from external appearances, the trained physician really looks into the body of his patient, examines his tissues, tests his secretions and excretions, studies his blood and fibre, and learns how the very cells are carrying on the vital processes.

It is universally acknowledged that the laboratory courses here, demanding 1,700 hours of actual undergraduate work, give this college high standing in the professional world. The knowledge and training gained in this way make it possible for the Ann Arbor graduate to "look into the patient" and to study him as a graduate of a purely clinical school cannot hope to do.

THE NEW LABORATORY BUILDING

A new building, consisting of high basement and three stories, thoroughly modern in appointment and equipment, was constructed three years ago for the accommodation of the departments of anatomy, histology, pathology, physiological chemistry, bacteriology and hygiene. In this building all students of the University who are pursuing medical studies receive their instruction in those branches requiring technical laboratory work.

THE LABORATORIES

The laboratories are so extensive and numerous that it will not be out of place, perhaps, to devote considerable space to their description.

ANATOMICAL LABORATORY

The laboratory of Anatomy is situated on the third floor of the new laboratory building, and contains four well-lighted and well-ventilated dissecting rooms. One of these rooms is for men, another for women. The other two rooms, which are smaller, are for special work. There is also a study room for the convenience of students and a large room is set apart for the study of the anatomy of the central nervous system.

The anatomical law of the state furnishes, without embarrassment, an ample supply of material for the pur-

pose of studying practical anatomy. During his course, each student is obliged to dissect thoroughly and carefully, under the supervision of competent demonstrators, every part of the body.

The Professor of Surgery supervises a course in operative surgery which all students, who have completed the requirements of descriptive and practical anatomy, are required to take.

CHEMICAL LABORATORIES

There is a separate large building containing about 38,000 square feet of floor space, situated in the center of the campus, devoted entirely to chemistry. In this building all the instruction in chemistry is given, except the course in physiological chemistry, which has been referred to in another connection. Among other provisions, the laboratories are arranged for classes in general, analytical, organic and physical chemistry. The School of Pharmacy is also located in this building. In each subject the student advances by progressive courses under the direction of an instructor. If one desires to specialize in any branch of chemistry there is furnished special opportunity for independent investigation.

The laboratory for general chemistry is separately organized. Courses in elementary inorganic chemistry, as well as physical chemistry and the advanced branches of the science are offered; research work, both in inorganic and in organic general chemistry, is also arranged for in a separate room. Modern apparatus is on hand for all the varieties of work that are liable to be undertaken, and a well-equipped balance is provided.

The laboratories of analytical chemistry, organic chemistry and chemical technology are carried on together. There are separate work-rooms for qualitative analysis, quantitative analysis and for optical work. The

building contains several lecture rooms, recitation rooms and a museum with collections for instruction in all branches of chemical science.

The chemical laboratories are open throughout the college year to all students of the University, and are regularly used by all departments except the Department of Law. They are also open to any person who wishes to pursue special studies therein, providing he complies with the conditions for admission to that department of the University to which the desired special studies properly belong.

Four hundred students are engaged in these laboratories at the same time, each at a table provided for one worker. During the year, from 600 to 800 students complete from one to four courses of study each in the various branches of chemistry. The students engage in chemical work as it is needful for their different purposes —the pursuit of science, or the preparation for teaching, for the several professions applying chemistry, and for the various chemical arts and industries.

The chemical library contains complete sets of all the most important chemical journals of present and former times, as well as the standard manuals, dictionaries, and encyclopedias. It thoroughly provides for all kinds of chemical work.

PHYSIOLOGICAL LABORATORY

The apartments provided for the Physiological Laboratory offer excellent facilities for class instruction and original investigation. A large and well-lighted room is appropriated chiefly to the use of undergraduate students who perform under the direction of instructors the fundamental physiological experiments, as far as possible the experiments being made on men.

Small rooms are devoted to advanced work and orig-

inal investigation. Conveniently situated are an apparatus room, a dark chamber for optical experiments, and a large workshop containing machinists' and carpenters' appliances. The instrumental equipment of this laboratory is good, and it contains all of the more essential instruments used in physiological demonstrations and research.

Several courses are given in the physiological laboratory, including lectures, recitations and demonstrations.

Lectures upon *animal physiology* are given five days a week the first semester and three days a week the second semester. They include a systematic review of the field of animal physiology, the physiological phenomena observed upon men being given especial emphasis. From time to time recitations are substituted for lectures. Such demonstrations as can be given profitably to a large class of students are made.

A laboratory course is open to all students who have made the required previous preparation. The course is given five afternoons a week, from 1:30 to 4:40, during nine weeks. The first section meets during the last nine weeks of the first semester, the second and third sections meet in the second semester. The object of the course is not only to familiarize the student with the ordinary methods employed in physiological work, so that he will be able to read more intelligently, but to cultivate a capacity for independent observation, and to supply that intimate knowledge of physiological processes which is to be obtained only by individual work. Inasmuch as this course is intended primarily for medical students, the experiments are made on the vertebrates, and, when the character of the experiment permits, on man, the students working in pairs, and alternately serving as subjects and experimenters. The experiments deal with the physiology of nerve and muscle; the physical problems of res-

piration and circulation; the nervous regulation of the heart, blood vessels, and respiratory mechanisms; reflex processes and their modification by re-enforcing and inhibitory influences; and some of the simpler phenomena of sensation. Each student is expected to perform individually each experiment, report the results obtained, either in the form of graphic records or tabulated observations, and accompany these with such notes as will make it clear that the purpose of the experiments and the phenomena observed are clearly understood. From time to time the section meets as a whole to discuss the results of the experiments which have been made, and at such times reports are given by its members upon special topics related to the work.

A course in research is open to such students as can show that they are prepared to carry on independently physiological investigations. The student is encouraged to develop originality in attacking physiological and biological problems. He is also expected to acquaint himself with the literature of the subject studied.

HISTOLOGICAL AND EMBRYOLOGICAL LABORATORY

The histological laboratory is on the second floor of the new laboratory building. It is well supplied with microscopes and accessories, microtomes, imbedding apparatus and all the other necessary appliances used in histological and embryological work. During his term of instruction in the laboratory each student is furnished with microscopical reagents, a microscope, and a table for his own use, so that the practical work is carried out by each individual for himself. In the elementary course in histology an effort is made to teach the student the use of the microscope, the methods of teasing, the methods of mounting paraffine and celloidin sections, and the use of a number of the more commonly employed stains.

During his stay in the laboratory the student makes about one hundred and fifty preparations, and he is required to sketch them all as he makes them. These preparations are so arranged as to furnish him with specimens of typical cells and cell division, and all the elementary tissues, of the various glands and organs of the body, of the epidermis, of the central and peripheral nervous system, and of the sensory end-organs and the special senses.

In the course on microscopical technique, which is open only to those who have completed the elementary work, the student is instructed in the various methods of hardening, staining, and counting red and white blood cells, and the use of the microscope in forensic medicine.

An optional laboratory course in the embryology of the salamander, the chick, and the mammalia is offered, which is open to students who have completed the elementary work in histology and a course in microscopical technique, and have attended lectures in embryology. There is also an optional laboratory course in the microscopic anatomy of the brain and the special senses.

PATHOLOGICAL LABORATORY

The facilities of the pathological department have been greatly extended since the erection of the new laboratory building, which affords more and better rooms for its accommodation.

This laboratory is supplied with microscopes, microtomes, paraffine ovens, and, the other apparatus necessary in the study of pathological histology. Each student is furnished with a locker containing a microscope with high and low powers, and is assigned to a table containing the necessary stains and reagents for practical work. These are furnished by the laboratory.

The supply of material for the study of pathologic his-

tology is the result of collections made in the pathological institutes of Vienna and Dresden, and embraces almost every known pathologic condition. This collection gives ample material for the regular courses, and, in addition, offers special opportunities to the advanced student who may wish to pursue studies in certain lines of special pathology, as the pathology of the nervous system, genito-urinary tract, skin, etc. It is especially to the graduate student that this collection presents a fine opportunity for special work, as he is thereby offered practically the same advantages as those given in the principal laboratories abroad.

In addition, an abundant supply of fresh material comes from the clinics of the University Hospitals, and this is utilized to the fullest extent in the teaching both of gross and of microscopical pathology. The laboratory is fitted with a Bausch and Lomb carbonic acid freezing microtome for use in the making of quick diagnoses and in the preparation of fresh material for class study. By the use of this instrument stained sections may be had in three minutes after the removal of the tissues from the body, and the student is thus enabled to make a study of morbid changes impossible in hardened material.

The required course in pathologic histology lasts eight weeks, five afternoons a week being required, though Saturday afternoon is usually taken for this work. The student studies the histology of morbid processes, in fresh and hardened material, in stained and unstained sections, and applies chemical tests, etc. He is further required to demonstrate his knowledge by drawings and written descriptions of the specimens. The course includes the study of the most important alterations in the blood and circulatory systems, changes in nutrition, tumors, infectious diseases, and the more important diseases of special organs. About one hundred and seventy-five specimens,

stained and ready for mounting, are given to the class as unknowns for identification and demonstration. These become the property of the student. The study of inflammation is also made in the living animal.

Written reports upon each of these specimens are required, and, in addition, fifty drawings.

A practical working knowledge of pathological technique is also required for each student; and he is instructed in the methods of examination of fresh tissues; in the various processes of hardening, embedding, cutting, etc., and in the use of the most important stains.

A special course in technique and in the diagnosis of malignancy is offered to junior students who have finished the regular course. Reagents and apparatus are furnished by the laboratory, and separate rooms are set apart for the use of the advanced students. The abundance of valuable material available for this course offers unusual opportunities to the physician who may wish to take special work. To such and to those who wish to work up material of their own, every facility is afforded. The members of this advanced class form a Journal Club which meets weekly. At these meetings reports are made in detail on material given the student for examination, papers are read, specimens exhibited, and general discussions held.

An advanced laboratory class for senior students is held on Saturday mornings. This course is limited to the special study of the blood, genito-urinary tract, eye, etc. An opportunity is given each student for work in any special line he may choose for original investigation.

The laboratory contains a set of pathological models and a nucleus of a pathological museum, which already contains many rare and valuable specimens. They are utilized for teaching purposes as far as possible.

Autopsies.—Clinical autopsies are held before the classes and the causes of death, if demonstrable, pointed out. No regular time can be set for this work, but a larger number of cases come under observation each year. A special room has been fitted up in the basement of the Homœopathic College building for this special purpose. The post-mortems are usually made under the supervision of the Professor of Theory and Practice. In the event of a post-mortem the students are excused from other work in hand so that they may attend.

BACTERIOLOGICAL LABORATORY

The west half of the second floor of the new laboratory building is devoted to work in bacteriology. The two main laboratories contain seventy-eight desks, used by beginners and by advanced students. All the material required for the work is supplied, practically at cost, from a well-stocked dispensing room. Four rooms are devoted to research work by the professor in charge, his assistants, and others qualified to carry on special studies. An incubating room, maintained at a constant temperature, is provided with individual drawers for the use of students. A similar room is reserved for the work in research. A cold room, including a spacious refrigerator, is cooled by means of a liquid-carbonic-acid plant in such a way that the refrigerator can be kept at, or below, the freezing point, while the temperature of the room itself is maintained about 60° F. A special compartment of 1,000 cubic feet capacity is reserved for experimental room disinfection. Provision is made for operative work on animals, cremation of infected material, sterilization of cages, etc. Well-lighted rooms in the basement are devoted to store rooms and animal rooms, and, in addition, a large room for micro-photography. Gas and water are sup-

plied to the hoods in every work room. The laboratory is equipped with apparatus and instruments of the best make.

HYGIENIC LABORATORY

In this laboratory the sanitary examination of foods and drinks forms a prominent part of the practical work. Samples of food, milk, water and other articles of human consumption are gathered from all parts of the country or are sent in for examination. Since more commodious quarters have been afforded, the facilities for original research have been much increased. Special rooms have been fitted up for the chemical, microscopical, and bacteriological study of foods and drinks, and for the prosecution of investigations in the chemistry and action of bacterial and other toxins.

LABORATORY OF PHYSIOLOGICAL CHEMISTRY

This laboratory is in the west half of the third floor of the new laboratory building. The two rooms for the elementary and the advanced work are provided with sixty desks. An adjoining room is equipped with balances and microscopes. A preparation room contains, among other things, a distilling plant from which the water is taken in pipes to different parts of the building. There are also well-equipped rooms for combustions, for optical work, and for gas analysis. In every room there are spacious hoods with fittings for steam and compressed air, in addition to gas and water. By an elaborate system of fan ventilation, the air in the laboratory is renewed every fifteen minutes. A recitation room is in direct connection with the laboratory.

Several courses are given in the department of physiological chemistry. A lecture course discussing the commoner phenomena appertaining to the subject and a laboratory course supplementary thereto are required of

every student. No student can be admitted to these courses who has not done the required work in the other branches of chemistry or an equivalent.

There are a number of advanced courses adapted to the needs of those who desire to qualify as sanitary officers, sanitary engineers, etc.

PATHOGENETIC LABORATORY

A laboratory of experimental pathogenesis has been established in the Homœopathic Hospital. This laboratory is equipped with the necessary apparatus for experimentation with medical substances upon the health body. It is a special feature of this school. Provings are made and each advanced student is required to do a certain amount of original work in the pathogenetic field. In order that those who submit themselves to the experiments may be under the entire censorship of the Director, a provers' table has been established at the expense of the department. The student puts himself under obligation, which of course is optional upon his part, to submit to the control of his diet, habits, exercise, etc. He must make to the director a complete report of all his varied physical experiences every twenty-four hours.

He is furnished with a book in which he records whatever variation from the normal he may perceive in himself. These records and reports are made the basis of an extended report which is published in the College publication at regular intervals. By this method, it is possible to attain a high degree of accuracy in the results of experiments.

As considerable knowledge of physiological chemistry, physiology, and symptomatology is essential to making accurate observations, especially upon others, this course is not open to the lower classmen.

LABORATORY OF APPLIED PATHOLOGY

The acquisition of an additional member of the teaching corps in 1905 made it possible to establish in the hospital a laboratory for the examination and analysis of fresh pathological and suspicious material. A commodious room has been fitted up in the high basement of the hospital, where at least two hours are spent every morning examining tissue, sputum, blood, stomach contents and such other parts of the body, of secretions and excretions as may be sent in by the clinical staff. The director is always personally in charge, and associates with himself a senior student as first assistant and a junior as second assistant. The assistants are so rotated that each student serves two periods as junior and two as senior assistant.

This laboratory is one of the most practical in the entire course, for it affords the student ample opportunity, with microscope and test tube, under constant supervision, to apply the theories and technique he has been taught in courses heretofore outlined.

THE HOSPITAL AND CLINICAL FACILITIES

Important as are the laboratory methods of instruction, the necessity of practical knowledge of sickness and disease has not been overlooked. Unique hospital privileges are offered the students of this Homœopathic Medical College. The state provides and equips its hospital and guarantees its maintenance. This obviates the necessity for private patients and the service needful to their reception. No patient is admitted except on his agreement to be presented to the class. The result is that every patient is available for clinical study. The city colleges, boasting of vast clinical facilities, have the associated hospitals filled with private patients, inaccessible to students, or with indigent people kept by the noble charity of endowment. By the very virtue of this, endowments are

given for sweet charity's sake, and not to promote the clinical knowledge of medical students. Therefore, few hospital wards are open for the free and unlimited use of undergraduates.

On the other hand, the University Hospital, Homœopathic, is in reality a grand clinical laboratory. The patient is admitted, primarily, for the benefit of the associated medical college, and, incidentally, that he may be cured. He is examined, his case diagnosed, his treatment prescribed and administered, as far as may be, by the medical students. When an operation is performed, it is in the presence of the class. The anæsthetic is given and assistance rendered by the students. All of this is done, of course, in the presence and under the direction of a member of the faculty, but the clinical knowledge which the student gains by actual experience is invaluable. It is doubtful if any other institution offers such close contact with an abundance of clinical material.

Did space permit, it would be interesting to take up the several departments of work, and detail the methods in each. In Physical Diagnosis, in Surgery and Surgical Dressings, in Gynæcology and daily treatment in Gynæcological cases, in the care and treatment of General Medical cases, in the diagnosis and treatment of Diseases of the Eye, Ear, Nose, and Throat, in the use of the trial case and correction of errors of refraction, in the examination, delivery, and after care of Obstetrical cases—in all these lines, every student of the upper classes has experiences which are multiplied many fold.

A NEW HOSPITAL BUILDING

The old hospital building, erected in 1892, was found inadequate to the needs of the Department. To relieve the pressure and increase the clinical facilities of the University, the State Legislature increased the mill-tax, and

made possible the erection of a magnificent new Homœopathic Hospital. The building was completed in 1901. Finished and occupied, it is the finest Homœopathic Hospital in the world. There may be others larger, but a capacity of one hundred and forty beds affords ample clinical facilities.

The new building, planned by a New York architect, is in the form of a T. It is built of native granite, "nigger-heads," to the top of the first story, and, above that, of Illinois gray pressed brick. With its roof of red tile, and a frontage of three hundred feet, it is an imposing building.

The interior finish is of red oak. There are six wards and many private rooms. The operating room is of marble and iron, thoroughly aseptic. The eye operating room is finished in white marble. Every modern idea in construction and arrangement has been incorporated in the plans.

Friendliness in Ann Arbor to the cause of Homœopathy is shown by the unanimity of the municipal vote to donate seventeen thousand dollars for the purchase of a site for the building.

The site is particurlarly well adapted to the purpose. The building is in the center of a yard comprising five acres of shade and lawn and is directly across the street from the gymnasium, which is upon the northeast corner of the old University campus. It is very easy of access either by carriage or street car. There is a street car line passing the grounds.

Clinics are held daily, at which times examinations of patients are made by the professors in charge, and by students under the direction of professors, prescriptions given, and surgical operations performed in the presence of the class. The several clinics are held on separate days, of which the profession at large will be notified.

In addition to special rooms with all modern apparatus and appliances for aseptic surgery, there is a lying-in-ward. Each senior student is required to attend cases of labor, and become familiar with the duties of the lying-in room, under the immediate direction of the Professor of Obstetrics.

The electrical department of the hospital is equipped with one of the best Roentgen ray outfits in the country. One of the most powerful coils manufactured, together with the accessories, answers admirably for all diagnostic and clinical purposes.

Much attention is paid to Diagnosis, and the abundance of clinical material furnishes many interesting cases. Students are required to take the history of patients, and, under proper supervision, make personal examinations and prescriptions. It is the aim of the Faculty to make clinical instruction systematic and thorough.

The hospital is kept open for patients during the entire year. Under the present organization, patients are much better accommodated, and clinical instruction is rendered more systematic and efficient than was formerly possible. The expenses to patients are only for their board, unusual appliances or special nursing, and medicines; the services of the Faculty being rendered gratuitously.

Patients who desire to enter the Hospital are requested to write to the Superintendent to ascertain if there is room for their accommodation, and to obtain a circular giving the rules governing admission.

SUMMARIZATION OF HOSPITAL STATISTICS

In estimating the clinical features of this institution, it must be noted that all the cases here enumerated were patients in the hospital and actually presented before the

regular classes and treated as clinical cases. Each case represents a separate individual.

CLASSIFICATION OF PATIENTS DURING THE YEAR PRECEDING JULY 1, 1907.

General Medical	225
General Surgical	396
Ophthalmological	673
Genito-Urinary	150
Gynæcological	220
Otological	226
Laryngological	109
Neurological	127
Dermatological	136
Pædiatric	72
Rhinological	180
Obstetrical	32

The occupation of these patients was, in order of their numbers, as follows: Housewife, Farmer, Laborer, Child, Domestic, Clerk, Unclassified, Professional (including teachers, ministers, physicians, etc.), Railroad Man, Mechanic, Merchant, Retired.

These individual patients represent over 21,000 prescriptions made during the college year.

In addition to the regular hospital service, the General Infirmary of the county, Washtenaw, having a large number of inmates, is under the entire medical control of a member of the Homœopathic Faculty. A considerable amount of material is available for the students from this source.

HOURS OF SERVICE

Clinical examinations, clinical demonstrations and operations in the actual presence of the class consume, as the regular schedule is now arranged, in the aggregate, 3,046 hours. This does not comprise the time occupied by the senior class in making dressings of surgical cases,

after-treatments and examining new patients. To include this service, two hours daily will have to be added, viz.: from 8 A. M. to 9 A. M. and from 4 P. M. to 5 P. M.

REQUIREMENT FOR ADMISSION

Every applicant for admission to the Homœopathic Department must be at least seventeen years of age, and present satisfactory evidence of good moral character.

Women are admitted, as to all other departments of the University, on the same conditions as men.

During the past few years the rules for admission to medical colleges have materially changed. Formerly, the college fixed its own entrance requirements and made its own curriculum. The colleges no longer have control over the entrance of students to the study of medicine.

A board acting under laws for the regulation of the practice of medicine controls the entrance to colleges, and examines the students after graduation before they are licensed to practice.

As the laws and rulings of boards in the several states are somewhat different, the student is advised, by all means, to be sure he is eligible to become a medical student in the state in which he lives or in which he desires to locate. Before coming to college he should correspond with the secretary of his state board having the matter in charge, and receive from him a medical student's certificate for his state. However, if he is not a resident of and wishes to qualify in Michigan, he should note carefully the rules and requirements of this state as set forth under "The Requirements for Michigan Students."

A considerable number of students coming from other states have qualified with the Michigan State Board of Registration in Medicine, and taken their examination for admission to practice before that board.

Michigan now has reciprocal agreements with the following states:

Under Qualification No. I—	*Under Qualification No. II—*
District of Columbia	Georgia
Georgia	Indiana
Illinois	Iowa
Indiana (one year practice)	Kansas
Iowa	Kentucky
Kansas	Maine
Kentucky	Maryland
Maine	Minnesota
Maryland	Missouri
Minnesota (one year practice)	Nebraska
Missouri	Ohio
Nebraska	South Carolina
Nevada	Vermont
New Hampshire	West Virginia
New Jersey	Wisconsin
New York	
North Dakota	
Ohio	
South Dakota	
South Carolina	
Vermont	
Virginia	
West Virginia	
Wisconsin	
Wyoming	

The "Qualifications" for reciprocity are defined by the Michigan State Board of Registration in Medicine as follows:

Qualification No. I. "That a certificate of registration showing that an examination has been made by the proper board of any state, on which an average grade of not less than 75 per cent. was awarded, the holder thereof having been at the time of said examination the legal possessor of a diploma from a medical college in good standing in the state where reciprocal registration is sought, may be accepted in lieu of an examination as evidence

of qualification. Provided, That in case the scope of the said examination was less than that prescribed by the stage in which registration is sought, the applicant may be required to submit to a supplemental examination by the board thereof in such subjects as have not been covered."

QUALIFICATION No. II. "That a certificate of registration, or license issued by the proper board of any state, may be accepted as evidence of qualification for reciprocal registration in any other state, provided the holder of such certificate had been engaged in the reputable practice of medicine in such state at least one year, and also provided that the holder thereof was, at the time of such registration, the legal possessor of a diploma issued by a medical college in good standing in the state in which reciprocal registration is sought, and that the date of such diploma was prior to the legal requirement of the examination test in such state."

REQUIREMENTS FOR MICHIGAN STUDENTS

Residents of the State of Michigan, or those contemplating registering under the Michigan laws, will observe the following, which is taken largely from the regulations of the State Board of Registration:

As given in the table below and upon the blank application sheet hereto attached, a *Count* is the measure of work completed successfully in a secondary or high school or other school of equal grade and rank, persued an entire year of 36 weeks, in one weekly recitation period of not less than 45 minutes. It will be observed that at least *Sixty Counts* are required in all and that as many as 35 of these Counts must be from the group marked "Required Group"; the remaining 25 Counts may be selected from the "Elective Group." The required subjects and minimum counts therein are, English, 10 Counts; Mathematics, 10 Counts; Latin, 10 Counts; Physics, 5 Counts. The student may make up all his 60 Counts from these subjects according to the scale given in the following detail. It does not often occur, however, that this is done; the Elective Group is freely drawn upon in completing the 60 Counts.

A student who is not able to present the full number

of Counts, may be admitted upon conditions and make them up either in the University or Ann Arbor High School. The City High School affords excellent opportunity for those who are deficient in entrance requirements.

DETAIL OF ACADEMIC (SECONDARY) WORK.

Furnished by the Secretary of the Michigan State Board of Registration in Medicine.

Total number of Counts, 60. Required Group, minimum, 35 Counts.

	Credits Accepted	
	Minimum	Maximum
Required Studies—	Counts	Counts
English	10	20
Mathematics	10	20
Latin	10	20
Physics	5	5
Totals	35	65
ELECTIVE GROUP. MAXIMUM 25 COUNTS.		
Elective Studies—		
Greek	8	10
French	8	10
German	8	10
Spanish	8	10
History	4	15
Chemistry	5	5
Botany	2	5
Zoology	2	5
Sometimes Botany and Zoology are studied as Biology; when so studied they can not be reckoned as additional counts.		
Physiology and Hygiene	2	5
English Literature	4	5
Trigonometry	2	2
Physical Geography	2	5
Drawing	2	2
Total Elective	25	

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RECOMMENDATION FOR ADMISSION TO THE HOMOEOPATHIC DEPARTMENT OF THE UNIVERSITY OF MICHIGAN

This certifies that .....
(name of candidate)

graduated from .....
(name of school)

on the.....day of.....19.....
is of good moral character and earned the units or counts written in the accompanying blank.
(For method of reckoning "counts" see Announcement, page 29)

Name and office of person filling out certiffcate .....

DETAIL OF ACADEMIC (SECONDARY) WORK AND EXAMINATION

TOTAL OF 60 COUNTS

REQUIRED GROUP—MINIMUM 35 COUNTS

REQUIRED STUDIES	CREDITS ACCEPTED		CREDITS
	Minimum Counts	Maximum Counts	
English	10	20	
Mathematics	10	20	
Latin	10	20	
Physics	5	5	
Total Required	35	65	

ELECTIVE GROUP—MAXIMUM 25 COUNTS

ELECTIVE STUDIES			
Greek	8	10	
French	8	10	
German	8	10	
Spanish	8	10	
History	4	15	
Chemistry	5	5	
Botany	2	5	
Zoology	2	5	
Biology	4	10	
Physiology and Hygiene	2	5	
English Literature	4	5	
Physical Geography	2	2	
Trigonometry	2	5	
Drawing	2	2	
Total Elective	25		

As used in this table, a Count is the measure of the work successfully completed in a secondary or high school pursued an entire school year of 36 weeks in one weekly recitation period of not less than forty-five minutes.

English Literature of the Elective Group may not be counted unless a year has been given to that subject in addition to the required 10 Counts in English, and Trigonometry may not be counted unless it is in addition to the required 10 Counts in Mathematics. Civics is not accepted as a subject, but may be counted as a part of American History.

The applicant can have the blank enclosed filled out by his high school principal or a school officer authorized to act in his capacity, or he can send to the College or Secretary of the State Board for the regular official form furnished by the state for the purpose.

In either case he should send his name to the College for preliminary enrollment.

NOTE.—An applicant for endorsement of Preliminary Education presenting a recognized literary diploma or certificate for entrance to medical schools of a minimum standard of not less than forty-five counts, in accordance with the Minimum Standard of Preliminary Education adopted by the Board, may be conditioned in 15 counts, and must remove such conditions before the Michigan Board of Preliminary Examiners, or other recognized authority, (course and examination in an authorized literary college or attendance and examination in a recognized secondary or high school) before beginning the second course in a recognized medical school counting toward the degree, otherwise the applicant will be held as not having complied with the requirements of the Board relative to its standard of Preliminary Education; Provided, That if, at the time of seeking endorsement, the applicant, in addition to the 45 counts required in the recognized diploma or certificate as a qualification for conditions, presents a recognized supplemental certificate of course and examination in necessary studies not covered in the diploma presented or the certificate, of a date prior to registration, or matriculation in a medical school, such supplemental certificate may be made a part of and included in the original diploma or certificate upon which an endorsement is sought in accordance with the method of standard adopted by the Board.

SCOPE OF THE PREPARATORY WORK.

The following descriptive outline indicates the amount of preparation expected in each of the subjects named:

Composition and Rhetoric.—The 10 Counts in composition and rhetoric should cover the following subjects:

Composition.—As preparation for this requirement, sustained and regular practice in writing is earnestly recommended. The student should prepare numerous written exercises throughout the four years of the high-

school course, and a sufficient number of these exercises should be corrected by the teacher and revised by the student to secure the desired accuracy. The subjects upon which the student writes should not be drawn exclusively from literature; a considerable proportion of them should be taken from the student's everyday experience; and topics should be so distributed as to give proper training in the various types of discourse, namely, description, narrative, argument, and exposition.

Rhetoric.—The student should be grounded in the essentials of rhetoric, but those principles should receive emphasis which are most likely to be of service to him in his practice in writing, such as the principles of sentential structure, paragraphing, and the outlining of the essay.

Grammar.—The applicant should be prepared to state intelligently the essential principles of grammar and to explain the syntactical structure of any sentence encountered in his reading.

Reading of Classics.—The following books are recommended by the Joint Conference on Uniform Entrance Requirements in English:

1906 and 1907. For reading: Shakespeare's *Merchant of Venice* and *Julius Caesar;* The Sir Roger de Coverley Papers in *The Spectator;* Goldsmith's *The Vicar of Wakefield;* Coleridge's *The Ancient Mariner;* Scott's *Ivanhoe;* Carlyle's *Essay on Burns;* Tennyson's *The Princess;* Lowell's *The Vision of Sir Launfal;* George Eliot's *Silas Marner.* For study and practice: Shakespeare's *Macbeth;* Milton's *Lycidas, Comus, L'Allegro, and Il Penseroso;* Burke's *Speech on Conciliation with America;* Macaulay's *Essays on Addison and Life of Johnson.*

1908, 1909, and 1910. For reading: Shakespeare's *Merchant of Venice* and *Macbeth;* The Sir Roger de Coverley Papers in *The Spectator;* Irving's *Life of Gold-*

smith; Coleridge's *The Ancient Mariner;* Scott's *Ivanhoe* and *The Lady of the Lake;* Tennyson's *Gareth and Lynette, Lancelot and Elaine,* and *The Passing of Arthur;* Lowell's *The Vision of Sir Launfal;* George Eliot's *Silas Marner.* For study and practice: Shakespeare's *Julius Cæsar;* Milton's *Lycidas, Comus, L'Allegro,* and *Il Penseroso;* Burke's *Speech on Conciliation with America;* Macaulay's *Essay on Addison* and *Life of Johnson.*

It is expected that the applicant will have read these books appreciatively and will have made himself familiar with the subject-matter and the form of each work. The reading should be connected, in reasonable measure, with the lives and characters of the authors read and with the history of their times.

Although the books mentioned above are recommended as preparation for this part of the requirement, they are not prescribed. Books of equal merit, covering a similar range of literary types, will be accepted as equivalents.

It is recommended that in connection with the reading of classics, the memorizing of notable passages, in both prose and poetry, should form a regular exercise throughout the whole preparatory period. This is all-important for the development of a correct taste in language and literature.

Applicants who present themselves for examination will be asked to write two essays of not less than two hundred words each, one upon a subject drawn from the books in the foregoing list, and the other upon a subject drawn from experience or observation. The language of these essays must be grammatical and clear. The spelling, punctuation, and capitalizing must be correct. The applicant must show ability to discriminate in the use of words and to construct well-organized sentences and paragraphs. A topical outline should accom-

pany each essay. The applicant should also be prepared to answer questions upon the fundamental principles of grammar and rhetoric.

English Literature.—The optional counts in this subject are expected to cover a year's work in addition to the three prescribed units in composition and rhetoric, described above. Stopford A. Brook's *English Literature,* or any other manual, may be used for an outline of the subject. As much time as practicable should be given to the careful reading of representative authors in each period.

N. B.—This requirement must not be confused with the reading of classics described under composition and rhetoric.

Mathematics.—The ten counts in mathematics required of all applicants include algebra through quadratics, and geometry, both plane and solid. Beman and Smith's *Elements of Algebra,* and the same author's *New Plane and Solid Geometry* are mentioned to indicate the scope and character of the work required.

Physics.—The required counts in physics include an amount represented by Carhart and Chute's *High School Physics.* The instruction in the class room should be supplemented by work in the physical laboratory to the extent of at least one period a week throughout the school year.

Greek.—The counts in Greek should be made up of grammar, prose composition, and reading, as follows:

Grammar.—Goodwin's or Hadley's. The inflection must be thoroughly mastered.

Prose Composition.—Jones's Exercises, with special reference to the writing of Greek with the accents, and to the general principles of syntax. Woodruff's *Greek Prose Composition* is taken as an equivalent.

Reading.—Three books of Xenophon's *Anabasis* and two books of Homer.

The so-called continental sound of the vowels and diphthongs, and pronunciation according to the written accents are preferred.

Latin.—An applicant should have completed Jones's *First Latin Book* or an equivalent amount in some other introductory text-book; and should have read four books of Caesar's *Gallic War,* and one of the orations of Cicero.

The counts in Latin should be made up of grammar, prose composition, and reading, as follows:

Grammar.—A thorough preparation in the elements of etymology, syntax, and prosody.

Prose Composition.—Applicants will be asked to translate into Latin a passage of connected English narrative, based upon some portion of the Caesar or Cicero read. As a text-book, Jones's, Collar's, Deniell's, or Bennett's is recommended. Special care should be taken with the training in prose composition.

Reading.—Four books of Caesar's *Gallic War;* six select orations of Cicero; and six books of Virgil's *Aeneid.* For any two books of the *Aeneid,* 1,500 lines of Ovid may be substituted. The books named may serve to indicate the amount and kind of text adapted to give the ability to read passages of moderate difficulty at sight, which is what the University requires.

The Roman method of pronouncing Latin is used at the University.

Botany.—The counts required of those who offer botany for admission is expected to include as much as a competent teacher, trained in laboratory methods, can accomplish with his classes in a year. No attempt is here made to indicate the exact extent of the ground to be covered, for the teacher should have large liberty in selecting material and topics as occasion requires; but it

is recommended that one-half year be given to the form, structure, and habits of flowering plants, while the other half-year may be given to the natural groups of plants, physiology, and the adaptation of form and structure to environment.

The following text-books are recommended as offering numerous and helpful suggestions: Atkinson's *Elementary Botany;* Bailey's *Botany;* Coulter's *Plant Relations and Plant Structures;* Spalding's *Introduction to Botany;* Stevens's *Introduction to Botany.* Ganong's *Teaching Botanist* is one of the most useful books for the teacher.

Zoology.—An applicant who offers counts in zoology will be expected to have a knowledge of at least eight of the following animal types: 1 and 2. Two protozoa: Amœba, Paramœcium, Vorticella, Stentor, Volvox; 3. A Sponge: Spongilla or Grantia; 4. A hydroid: Hydra, to be compared with a medusoid form; 5. An echinoderm: starfish or sea-urchin; 6. An annelid: the earthworm or the leech; 7. A crustacean: crayfish, lobster, or crab; 8. An insect: butterfly (including immature stages), grasshopper, cricket, cockroach, or other insect; 9. A mollusk: the fresh water mussel or one of the snails; 10. A fish: minnow or perch; 11. An amphibian: frog, toad, tree-toad, salamander (Amblystoma), or mudpuppy (Necturus).

These forms must be studied by the laboratory method. Laboratory work should be directed not merely toward a study of animal structure, but as far as practicable toward the study of habits and reactions. It should furnish the basis for the class room discussion of principles; especially of evolution. Of the four periods per week that must be given to the work, two at least should be laboratory periods of two hours each, and the other two should be given to recitations or other class exercises. Careful

original notes and drawings must be presented by applicants as part of the examination.

The mention of the following books may serve to indicate the character of the work required: Needham's *Elementary Lessons in Zoology;* Davenport's *Introduction to Zoology;* Jordan and Kellogg's *Animal Life;* French's *Animal Activities.*

Biology.—One-half of the work above outlined in botany together with one-half of that outlined in zoology, will meet the requirements in biology.

French.—The applicant who offers eight counts in this subject will be expected to read at sight easy French, and to translate correctly into French simple English sentences. The first year of preparation ought to be spent chiefly on the grammar and easy reading; and the second devoted to reading good modern French; accompanied by grammatical analysis and exercises in writing. The texts read should be chiefly narrative and conversational prose; modern, rather than classic, dramas should be read.

The applicant who offers any counts in French should be prepared on the two counts above described and on additional matter, as follows: The third and fourth years should be spent in acquiring as great a familiarity as possible with the literature, in future practice in composition, and, where feasible, in practice in conversation. Some of the plays of Corneille, Racine, and Moliére should be read; some specimens of the best prose in history, memoirs, and essay; and some of the lyric poetry of this century. It is advised that the literature as a whole be studied in Saintsbury's or in Warren's Primer. The applicant ought also to be able to express himself in French grammatically and with ease on ordinary topics.

German.—The applicant who offers eight counts in German should be able to pronounce German correctly and to take part with reasonable correctness and facility

in a simple conversation upon some topic drawn from his preparatory work. He will be expected to evince his thorough familiarity with the everyday facts of grammar by putting illustrative English phrases into German, and to be able to translate at sight a passage of fairly easy prose.

The applicant who offers ten counts in German should be prepared on the eight counts above described and on additional matter, as follows: He should have read five classical dramas, selected from the works of Goethe, Schiller, and Lessing; and Schiller's *History of the Thirty Years' War,* or an equivalent amount of other historical reading or of good modern fiction. He will be required to write a short essay in German upon some subject taken from the works which he presents. He ought also to be able to express himself in German grammatically and with ease on ordinary topics.

History.—The electives in history may be met by selections from the following list:

Ancient History to the year 800 A. D., 4 or 5 counts.
Mediæval and Modern History, 4 or 5 counts.
English History, 4 or 5 counts.
United States History and Government, 4 or 5 counts.

A year's work in General History, with the use of such a book as Myers's *General History,* will still be accepted, though it is believed that better results will be obtained if a year is given to Ancient History down to the Fall of the Roman Empire (or, preferably, to the year 800 A. D.), and a year to Mediæval and Modern History.

Physiography. Dryer's *Lessons in Physical Geography,* Davis's *Physical Geography,* or Tarr's *New Physical Geography* is recommended as a text-book. The text-book work should be supplemented by conferences, field

excursions, laboratory work in meteorology, and the reading of such books as Geikie's *Earth Sculpture,* Shaler's *Outlines of the Earth's History* and *Aspects of the Earth,* Russell's *Lakes of North America, Glaciers of North America, Volcanoes of North America,* and *Rivers of North America,* and Muir's *Mountains of California.* In connection with the laboratory work, Davis's *Elementary Meteorology* and Ward's *Practical Exercises in Elementary Meteorology* are recommended.

Chemistry.—The nature and extent of the requirements in this subject are indicated by the mention of Freer's *Elementary Chemistry* as a text-book, or an equivalent amount in Remsen's *Introduction to the Study of Chemistry.* The study of the text should be accompanied by laboratory work.

REGISTRATION

All matriculates who have any intention of practicing medicine in the State of Michigan must present their credentials to the Michigan State Board of Medical Examiners, which can be done through the Faculty of the Department. The minimum legal requirements for admission to a medical school in this State are defined by statute.

Before admission to registration every applicant is required to present to the Secretary of the Faculty the Treasurer's receipt for the payment of the matriculation fee and the annual fee. It will, therefore, be necessary for him to apply to the Secretary of the University at his office in University Hall, register his name as a student in the Homœopathic Medical College, and pay his fees to the Treasurer. In case of rejection, the money paid preliminary to examination will be refunded.

The applicant is advised to call in person upon the Dean or Secretary of the Faculty as soon as convenient after arrival in Ann Arbor.

ADMISSION TO ADVANCED STANDING

Persons who have studied medicine elsewhere may be admitted to advanced standing upon evidence of proficiency in the studies which have already been pursued by the class to which they seek admission.

ADMISSION OF WOMEN

The course of instruction for women is in all respects equal to that for men. Practical Anatomy is pursued by the two sexes in separate rooms; but in the lectures, in public clinics, in the laboratories, and in various class exercises, it is found that both sexes may attend with propriety at the same time.

SCHEDULE OF STUDIES

The following schedule shows quite accurately the arrangement of studies for the course of four years. The lectures are usually given in the forenoon and the laboratory and clinical courses, with a few exceptions, in the afternoon.

For the laboratory courses the students are divided into sections, and work in periods. A period is in some courses twelve weeks, in one six weeks, in the others nine weeks. The sections and periods are so arranged that, by repeating the courses each year a number of times, each student can be occupied by regular laboratory employment and in the allotted time accomplish his work. Excepting the laboratories of pathology and experimental pathogenesis, the laboratory courses are completed during the freshman and sophomore years.

FIRST YEAR

LECTURES AND RECITATIONS IN THE FIRST SEMESTER

Subjects	*Hours Required*
Principles of Medicine,	1 hour per week.
General Chemistry,	4 hours per week.
Histology and Embryology,	3 hours per week.
Osteology, Laboratory and Recitations,	2 hours every day for a period of six weeks.
Physics (optional),	5 hours per week.

SECOND SEMESTER

Subjects	*Hours Required*
Principles of Medicine, Therapeutics and Minor Surgery. These subjects are so arranged that they occupy	2 hours per week.
Physiology,	4 hours per week.
Organic Chemistry,	4 hours per week.
Histology and Embryology,	3 hours per week.
Toxicology,	2 hours per week.

LABORATORY WORK DURING THE FIRST YEAR

Anatomy (2 periods), 1 to 5 P. M., for periods of 9 weeks.
Chemistry, period of 12 weeks, from 10 to 12 each A. M.
Histology and Embryology, 1 to 5 P. M., for a period of 9 weeks.

SECOND YEAR

FIRST SEMESTER

Subjects	*Hours Required*
Materia Medica,	1 hour per week.
Physical Diagnosis,	1 hour per week.
Surgery,	1 hour per week.
Physiology,	5 hours per week.
Bacteriology,	3 hours per week.
Physiclogical Chemistry,	3 hours per week.

SECOND SEMESTER

Materia Medica,	1 hour per week.
Physical Diagnosis,	1 hour per week.
Surgery,	1 hour per week.
Physiology,	3 hours per week.
Hygiene,	3 hours per week.
Pathology,	4 hours per week.

LABORATORY WORK DURING THE SECOND YEAR

Bacteriology, every afternoon from 1 to 5, until close of period.

Physiological Chemistry, every afternoon from 1 to 5, until close of period.

Physiology (elective), every afternoon until close of period.

THIRD YEAR

General Medicine,	4 hours per week.
Materia Medica,	3 hours per week.
Gynaecology,	5 hours per week.
Surgery,	5 hours per week.
Ophthalmology and Otology,	4 hours per week.
Practical Pathology, Laboratory,	5 hours per week for a period.

The work for the third- and fourth-year students is largely clinical. The courses in some of the departments, as Materia Medica, Theory and Practice, Surgery, etc., require two years for completion. In these and in the clinics the third- and fourth-year students are classed together.

In the one-year courses these classes are separate, of course. Reference should be made to the schedule card given for the fourth—or senior year.

FOURTH YEAR

The following is a sample schedule for the Senior Class, one semester. It is given merely to indicate the general plan and will, in view of additions to the teaching force described upon other pages, be considerably extended hereafter. The aim is to keep the hours for clinics stationary. They are seldom changed and then only for important reasons.

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
A. M. 8	Hospital Service	Hospital Service	Hospital Service	Hospital Service	Hospital Service
9	Ophthal-mology	Surgical Clinic	Theory and Practice	Materia Medica	Materia Medica
10	Materia Medica	Surgical Clinic	Dermatology	Laryngology Physical Diagnosis	Surgery
11	Obstetrics	Surgery	Medical Clinic	Medical Demon-stration Clinic	Obstetrics
P M. 1:15	Theory and Practice	Eye, Ear, Nose and Throat Clinic	Gynæcological Clinic	Eye, Ear, Nose and Throat Clinic	Surgical Clinic
2	Gynæcological Clinic	Eye, Ear, Nose and Throat Clinic	Gynæcological Clinic	Eye, Ear, Nose and Throat Clinic	Surgical Clinic
3	Gynæcological Clinic	Medical Jurisprudence	Gynæcological Clinic	Nervous Clinic	Surgical Clinic
4	Hospital Service	Hospital Service	Hospital Service	Hospital Service	Hospital Service

AN ELECTIVE FIFTH YEAR

At a meeting of the College Faculty held in March last, a measure was brought forward by the Dean to accommodate those students who desire more work than is ordinarily provided for in the college curriculum.

There is also a growing tendency in medical colleges to increase the time of study. This measure is, in part, in anticipation of the time, perhaps some years distant, when the required course will include five, instead of four, years.

The following recommendation was adopted and presented to the Board of Regents:

To encourage more advanced study than is required by law or provided for in the ordinary four years' course, a fifth year of optional work is offered. Uuntil further notice is given, it will be entirely optional with the student whether he elects to study an additional year; however, if his pecuniary means permit and he has the desire for more complete equipment by pursuing special lines of laboratory, medical or surgical study, he is advised to elect a five years' course.

To show that he has completed a five-years' medical course, in addition to the regular diploma conferring upon him the degree of Doctor of Medicine, issued by the officers of the University, the Faculty will give him a certificate setting forth the extent of his additional studies which will be of use to him in case, in the future, he desires to pursue post-graduate work.

If the student wishes to qualify himself in chemistry, or biology, he can elect, during his freshman year, to take some of the several courses in these branches that are always available in the University. If he desires to put all his time upon medical and surgical subjects, he must elect two branches in which he will specialize, one major and two minor. In these studies he will be directed by the professors in charge of the departments in which he decides to study, who will form a committee to supervise his work. He may be appointed an assistant to one of the clinical departments. He will also be required to do systematic reading, to be quizzed from time to time and

to write a thesis in the branch which he selects as his major. He will be required during the fifth year to do at least as much work as amounts to thirty hours' credits. In order to receive this credit he must read his thesis and subject himself to a quiz in the presence of the committee who have directed his study, and such other persons as may wish to attend by their permission. The ample libraries, laboratories and hospital afford abundant facilities for such studies as are contemplated in the additional year's work herein outlined.

THE PRACTICAL CHAIRS

MATERIA MEDICA AND THERAPEUTICS

Materia Medica is taught as a natural science. Beginning with a series of lectures upon the principles of Homœopathic therapeutics to the freshmen, courses are given through the entire four years. During the junior and senior years three lectures are given weekly. As far as possible, the original provings are made the basis of the studies. The genius, characteristics and relationships of drugs are taught according to the methods that a long experience has demonstrated to be the best. What is ordinarily called the physiological action of drugs receives due attention.

In no department of medicine need the discriminating powers of the mind be so much disciplined as in this branch. The cultivation of the memory is also of great importance. To develop these faculties the "quiz" is of great use. Every student is required to stand a thorough questioning and examination upon each remedy considered.

Reference has been made, previously, to the Laboratory of Drug Pathogenesis in which each student is expected to do a certain amount of original work towards amplifying the materia medica.

A course in homœopathic pharmacology is also given.

The number of hours given to lectures and recitations in materia medica is 260—, special lectures and laboratory hours not included.

All the text-books published upon the subject are in the library.

PRINCIPLES OF MEDICINE

This course is given to the freshmen by the professor of theory and practice. It continues through the entire year with one lecture weekly. The object is to familiarize the student, as soon as possible, with medical phraseology and at the same time give him the scientific explanation, so far as possible, of the nature of disease, its predisposing and determining causes, and the principles upon which a system of cure must be constructed. Attention is given to historic medicine and to the various systems that have been in vogue as means of attempted cure. The class occasionally accompanies the teacher through the hospital wards for the purpose of having their attention called to the different types of patients and teaching them how and what to observe.

The student is required to take copious notes and to present his note-book from time to time for examination and correction.

INTERNAL MEDICINE

The instruction in theory and practice is didactic and clinical. The required number of hours for lectures, recitations and quizzes is 236; the number of hours for scheduled clinics is 400. In addition to this, supplementary lectures and discussions are given from time to time. At least a hundred hours are also given to sub- and demonstration-clinics. The subject is divided into courses covering all the ground, both general and special, with which a physician in ordinary practice must be familiar. The aim is to make the student, by applying his knowledge of

physiology, anatomy and pathology, a good diagnostician; his knowledge of materia medica, a good prescriber. During the last semester of the senior year, the students have the privilege of requesting the discussion of subjects in which they may have special interest or which they desire to review. Subjects and cases are assigned students, upon which they prepare papers and reports. These reports are read in the presence of the professor and the entire class, who have the privilege of asking proper questions, which the writer is supposed to be prepared to answer. The immense University library, which contains thousands of medical books and nearly every medical and scientific journal published, is always available in the preparation of the papers and reports. No special text-book is recommended, but the student should bring to college all works upon the subject of medicine he may have acquired. As a very large number of the students are from the families of physicians, frequently they already have control of a number of books. The library, containing all the literature of moment ever published in the Homœopathic school, makes the purchase of special text-books not so necessary as in institutions less generously provided.

DISEASES OF CHILDREN

Especial attention is given to Pediatrics in connection with general medicine. Several lectures are given upon the subject of diseases incident to the extremes of life in which the susceptibilities of nurslings and growing children are taught separately. The contagious and infections peculiar to childhood are considered in the lectures upon infectious diseases. A special course upon the management of children is given in the Training School for Nurses; certain ones of these lectures the medical students are required to attend. The important subject of infant feeding is referred to under *Dietetics.*

DIETETICS

A special course is given in which the problems of food in relation to health and disease are discussed. The feeding of invalids and infants is given special attention. In the clinics, whenever the question of the effects of diet, the preparation of foods and drinks and their proper administration can be profitably considered, the most is made of the opportunity. There is in the hospital a diet kitchen in charge of a scientific dietitian in which the special diet lists are prepared and from which they are served. The senior students in charge of cases, under proper supervision, are required to make out orders for the feeding of their patients and to observe the preparation of the food.

PHYSICAL AND MEDICAL DIAGNOSIS

These branches are taught as separate courses with the use of text-books supplemented by lectures. Practical demonstrations are given using the cases in the hospital. The course in physical diagnosis begins with the sophomore year and continues with one hour a week until the close of the first half of the junior year. The class is divided into sections for personal instruction in the arts of inspection, auscultation, percussion, palpation, etc. In this way each student is instructed individually and is not permitted to leave his section until he can recognize, without assistance or suggestion, the commoner cardiac, respiratory and abdominal phenomena presented in a number of typical and "mixed" cases. Particular care is taken to qualify the students as physical examiners in life insurance, or for pension and other official boards.

SURGERY

The courses in this department comprise a continuous series lasting three years, covering systematically the entire subject of general surgery.

During the second year, a complete course of lectures is given on the general principles of surgery, minor surgery and bandaging.

The subjects of special, regional and operative surgery are divided into two courses. Each course is given in alternate years. Thus, while the juniors and seniors attend the same lectures, each graduating class will have covered the whole subject without repeating the work of the preceding year.

While the didactic work is intended to be complete enough to fit the student to take the examination given by any state examining board, the clinical teaching is considered of prime importance. A surgical patient upon entering the hospital is assigned to one of the senior students, whose duty it is to take the history of the case and to make such examinations as will enable him to diagnose. The student continues in charge of the patient until dismissed from the hospital. If there be an operation, he does all the dressings and prescribes the remedies under the direction of the surgeon in charge. This gives the student the advantages of both practical, routine experience and personal instruction. One hour in the morning and one in the afternoon are set aside for this service.

Another important feature of the clinical work is the assisting at operations. Each member of the senior class is required to be, for a certain period, assistant anæsthetist, instrument man, second assistant and first assistant to the operator. Last year each member of the class spent, at least, ten weeks in this special work. All of the clinical assistants to the operator are members of the senior class. The house surgeon has the general oversight of the anæsthetics. The fact that the hospital is purely a clinical institution makes this laboratory method of clinical teaching possible. The college schedule requires 200 hours of class-room work, and 720 hours of

operative clinics in surgery. This does not include cases requiring especial attention out of regular time, emergency cases and special demonstrations in surgical technique. Reference has been made in the section of Anatomy to the course in operative surgery upon the cadaver which is given in the post-mortem room of the college building.

OPHTHALMOLOGY

The department of ophthalmology was formerly combined with diseases of the ear, nose and throat. There is neither anatomical, medical or surgical reason for uniting these several subjects under one head. For this reason the change.

The proper treatment of diseases, those of the eye especially, depends upon diagnosis. Blindness is many times the result of some doctor's ignorance and neglect of a common disease of the eye. Many functional nervous conditions and symptoms referred to remote parts of the body are now recognized to be "eye reflexes." The modern physician must know about these things and be skilled in their diagnosis. The clinic, which is one of the largest that the country affords, furnishes unusual advantages for learning practical ophthalmology, and since the professor in charge is free to devote his entire time to the subject, a course in training is offered that will be very attractive to even the specialist. Students have cases assigned them for dressing and treatment, from time to time, and thus acquire practical skill and knowledge in diagnosis, in the use of the various instruments, and in the correction of errors of refraction. Practical application of the knowledge obtained in the bacteriological and pathological laboratories is made a special feature of this chair.

Refraction is the most important branch of ophthalmology and, in a sense, is fundamental to the whole of

that science. The large out clinic, patronized by multitudes of eye users—the University students—makes it possible to give every senior and junior almost daily practice with the test-case. It is expected that at graduation every student will be prepared to find and properly adjust the glasses required by any patient.

During the past year every senior student has examined scores of cataract cases and has witnessed the extraction of at least one hundred cataracts. By actual contact he learns the methods of diagnosis, preparation for operations, and after-care of such patients. In this practical way, he is taught the treatment of complications and acquires a degree of confidence in his own ability, which must prove of value to the practitioner.

DISEASES PECULIAR TO WOMEN

The course of study in these branches is so arranged that separate lectures are given to the several classes in a graded course. Students are drilled in the fundamental branches of gynæcology, and are taught the use of instruments, the various methods of making gnyæcological examinations, etc. With the third year the student enters upon both didactic and clinical work.

The number of hours devoted to class-room work in this branch is 144.

SURGICAL GYNAECOLOGY

In the Gynæcological, the same as in the General Surgical clinics, the seniors assist in all operations, by sections, each one, in turn, getting actual experience in all the details of preparation, anæsthetization, handling instruments, putting on dressings, etc.

In this, the only practical way of teaching these subjects, every detail of technique is mastered. The student is told why and how the several steps are taken and the

power of observation as well as mechanical dexterity, is developed to the highest possible degree.

The care of the patients, both medical and operative, is in the hands of students to whom they are assigned upon entering the hospital; the professor or a house physician supervising the service.

The number of hours given to clinical gynæcology, emergency cases and sub-clinics not counted, is 680.

OBSTETRICS

The course begins in the junior year when the anatomical, physiological and pathological features of the subject are taught by recitations, lectures and demonstrations.

In the senior year lectures are delivered upon special subjects, and the senior students are required to make physical and local examinations in the sub-clinics of this department, thus familiarizing themselves with the various methods of practicing touch, palpation, obstetric auscultation, etc., utilizing to the best possible advantage the many patients availing themselves of this special department of the clinic. Cases of obstetrics are assigned to each senior for his especial delivery and personal attendance. In the year just closed each senior witnessed from ten to twenty confinements.

The students are not only thoroughly taught the general principles, and the management of normal labor and the puerperium, but are also well drilled regarding the forces involved in the mechanism of labor. They are then well prepared to understand the various abnormal and pathological conditions attending labor. Especial emphasis is placed upon the treatment of the pathology of the puerperium. The various obstetric operations are carefully outlined and explained, and many of them are illustrated from the numerous cases in the obstetric clinic.

The obstetric clinic is, of course, always an emergency clinic. The senior students are required to lodge in houses having telephones so that they may be summoned. The law and rules of the Board of Regents make provision for as many cases at the hospital as may be required. Each student not only has the privilege but is required to conduct a number of confinements in the presence of a section of his class and a demonstrator; the professor of obstetrics is usually present. The average number of deliveries that each senior has attended for the past several years has been over 25.

The number of hours devoted to the teaching of obstetrics, not including clinics and demonstrations, is 144.

OTOLOGY, RHINOLOGY AND LARYNGOLOGY

This has been established as a distinct department with a specialist, who is full professor, in charge. The basis of the instruction, as in other departments, will be the material, that has always been sufficient, afforded by the in- and out-patient departments of the hospital. Owing to the fact that Michigan is unfortunately situated with reference to catarrhal troubles of the respiratory tract or the popularity of the institution, there are always, at every clinic, from fifteen to twenty patients awaiting medical, topical or surgical treatments of diseases of the nose, throat and ear. The students will be required to make instrumental as well as other examinations and diagnoses and to indicate the lines of treatment under the supervision of the professor. There will be regular courses of lectures upon the subjects. It is anticipated that the institution, now that the facilities for examination and treatment of cases have been enlarged, will be able to afford abundant relief of cases who apply and also to enhance in proportion the students' advantages for studying the fundamentals of the various specialties in medi-

cine. While the aim is not to make specialists, but general practitioners of medicine and surgery, it is appreciated that the instruction must be imparted by specialists and the fundamentals of all the different clinical lines of work thoroughly inculcated and that a large and varied clinic is essential.

MEDICAL JURISPRUDENCE

The course in forensic medicine comes during the last semester of the senior year. The Dean of the Department of Law lectures to the joint classes of the law and medical departments upon the legal questions and relations appertaining to the practice of medicine and surgery. His lectures are given in the law building of the University. The lectures upon the Code of Medical Ethics are given in the lecture room of the hospital by the Dean of this Department.

MENTAL AND NERVOUS DISEASES

A special course on mental diseases is given every year by Dr. Oscar R. Long, Superintendent of the State Asylum at Ionia.

In the hospital there is abundant material for a thorough clinical course in Nervous Diseases. Professor Dewey holds a clinic in this department every Thursday afternoon. He also gives a course of lectures upon the subject.

Dr. W. A. Polglase, Superintendent of the Michigan Home for the Feeble-Minded, is one of the lecturers in this department.

DERMATOLOGY

The course in Dermatology consists of lectures, quizzes and a weekly clinic which is well patronized. Photographic, lithographic, and stereopticon plates are used in the differential demonstrations. Particular attention is given to diagnosis. The student is taught the dis-

tinguishing features between cases presented and other simulating conditions.

The department is well equipped with the latest Roetgen Ray and other electrical appliances, and practical instruction is given in their general and special adaptability to the treatment of malignant diseases of the skin.

TOXICOLOGY

The Director of the Pathogenetic and Pathological Laboratory give a course in toxicology and allied subjects. The antidotal treatment of poisons and the medico-legal aspects of the subject comes under this head. The course occupies two hours a week during one semester.

THE SEMINARY FEATURE

One who has observed the methods used in medical societies and listened to the discussions of papers presented, must have been impressed with the uncertainty of the programme and the halting speech of the participants. Busy doctors have little time for special study and rarely indulge themselves the benefits of post-graduate instruction. They may be excused for this, but to neglect the opportunities afforded by membership in and attendance upon the medical societies is little short of a crime against themselves and society as well. It is very beneficial to attend medical meetings and to listen to specially prepared papers and the discussions thereon by practical men. The attendant absorbs an immense amount of information and becomes a better physician thereby. He makes medical progress, and by reason of his advanced knowledge becomes of more service to his community. To neglect these opportunities is oftentimes little less than criminal.

The physician who attends, as he should, the sessions of his societies should contribute from his experience. He must do his share, if not by a part in the formal pro-

gramme, at least by occasional discussion of the essays presented. The nature of the physician's duties leads him away from public speaking. The platform has terrors for the modest doctor. In order that he may do his part in the medical society, it is important that during his student days he should be given training in speaking and become accustomed to formulating his ideas and clothe them in such language as will give him the ear of a welcome audience.

With this in view, the senior class is organized as a medical society and meets at least an hour a week to listen to a paper prepared by one of its members. At the opening of the semester each student is assigned a topic covering some portion of the work in the general subject in which the seminary will be held. He will give a fifteen or twenty minute address upon his topic. The rest of the hour, except the last ten minutes, is taken up by short discussions, participated in by members of the class. The essayist answers questions which may be put to him, and formally closes the discussion. The instructor, who presides, then criticises the work of the hour and adds his own views.

This hour is looked forward to and is thoroughly enjoyed by every student. The papers are strikingly original and frequently give evidence of an immense amount of study and research. The discussions, while earnest and even pointed, are helpful and suggestive.

As the year passes, every student gives evidence of improvement. He is more ready of expression and shows greater mental freedom when upon his feet. The practice is helpful to the future practitioner, who has been taught thus early the importance of medical societies and made familiar with the methods of such organizations. Likewise he becomes more thoroughly grounded in the subjects considered.

Heretofore this special kind of training has been mostly confined to a single group of subjects, viz.: laryngology and rhinology. Hereafter, the seminary will be held in different courses, one time it may be in Surgery, another in Obstetrics, or another, Ophthalmology, etc.

DEMONSTRATION COURSES IN THE SPECIALTIES

In the limited space of a college announcement it is impossible to enlarge upon all the good features of the school. It is the aim of this Faculty to give the student, not glittering generalities in medicine, but specific instruction in each branch of the science and art of practice.

As previously pointed out, before graduation, each student is required to do actual work in demonstrating his medical and surgical skill.

By operation upon the cadaver and upon animals; by manipulation of manikins and models; by actual dressings of wounds and bandaging; by thorough drill in the uses of the ophthalmoscope, the laryngoscope, the test case and spectacle fitting; by the use of the microscope and spectroscope; by the making of tinctures and dilutions; by bedside demonstrations and examinations; by actual diagnosing and prescribing—these are the methods by which the students become practical and prepared to make successful physicians.

The classes are divided into sections, so that in turn each individual has his share of actual work.

All these demonstration courses are given without extra expense. In most colleges a fee is required in each of half a dozen specialties, but it has been decided to give this work without charge. Also, students assist at operations and take turns in ward visiting. The advantages offered for the practical application of theoretical knowledge are unsurpassed in this country. Students come in personal contact with the members of the Faculty, and profit accordingly.

POST-GRADUATE INSTRUCTION

Every encouragement is offered graduates who desire special privileges for study. Medical science has made such rapid progress during recent years that graduates of a short time ago feel the necessity of returning to the medical centers for further light in the modern advances. The great laboratories and special courses of this college offer superior advantages to graduates. Any physician desiring to avail himself of the privileges here offered should correspond with the Dean.

COMBINED COURSE IN COLLEGIATE AND MEDICAL STUDIES

One hundred and twenty hours of work are required for graduation in the Literary Department of the University. The subjects included in the first two years of the curriculum of the Homœopathic Department are all provided for in the courses of instruction given in the Literary Department. The character and the extent of the instruction in these subjects are not, however, in all cases identical in the two departments. The following scheme is, therefore, given to show which of the courses offered in the Homœopathic Department are accepted in the Department of Literature, Science, and the Arts, as covering the requirements in the corresponding course given in that department.

FIRST YEAR

Medical Courses.	*Literary Courses,*
Anatomy and Osteology,	Human Anatomy: Courses 1, 2, 3, 5.*
General Chemistry,	General Chemistry: Courses 1, 2.
Organic Chemistry,	Organic Chemistry: Course 28.
Laboratory Chemistry,	Analytical Chemistry: Course 3.
Physics,	Physics: Course 1.
Bacteriology,	Bacteriology: Courses 2, 3.
Histology,	Zoology: Course 6 or 7.

*Course 4 in Zoology is accepted in place of Human Anatomy 1; and Course 8 in Zoology is accepted in place of Human Anatomy 2 and 3.

SECOND YEAR

Medical Courses.	*Literary Courses.*
Anatomy,	Human Anatomy: Courses 4, 6.
Physiology,	Physiology: Courses 1, 2.
Hygiene,	Hygiene: Courses 1, 1*a*.
Embryology,	Zoology: Course 9.
Physiological Chemistry.	Physiological Chemistry: Courses 6, 7.

A student who intends to pursue the study of medicine in the Homœopathic Medical College and at the same time to gain his A.B. degree, may shorten his total period of residence at the University by electing, as an undergraduate, the courses above named; the precise amount of time gained depending upon the amount of literary work he may be able to complete. If he wishes to arrange his work in such a way as to earn the two degrees in six years of study, he must complete all of the above-named accepted courses before taking his first degree; and he must also make his intention known to the proper authorities as early as the beginning of his third year of undergraduate work, and obtain special permission to be registered as a student in the combined course.

Students who wish to take advantage of the opportunity here offered for combined collegiate and medical work should consult frequently after the first year with a committee appointed to consider questions arising in this connection. This committee at present consists of Professors HINSDALE and COPELAND.

A student who aims to earn two degrees, Bachelor of Science and Doctor of Medicine, in six years will find it necessary to arrange his studies with this end in view from the beginning of his first year of residence at the University. The amount of work prescribed for the two degrees is sufficient to fill nearly all the student's time, leaving only a small number of hours free for electives. To enable such a student to plan his work intelligently

and systematically, a scheme of study covering four years is here given. The scheme does not represent a complete prescribed course, nor the only course possible, but it is intended to show an order in which the prescribed studies may be taken to advantage. Some elective work in addition will be needed to satisfy the requirements for the bachelor's degree.

FIRST YEAR

First Semester: French, four hours; German, four hours; English, two hours; Mathematics, three hours; General Chemistry, three hours.

SECOND YEAR

First Semester: English, two hours; Analytical Chemistry, five hours; General Biology, five hours; Bacteriology, three hours.

Second Semester: Organic Chemistry, four hours; Zoology, three hours; Bacteriology, five hours.

THIRD YEAR

Italics indicate medical courses.

First Semester: Hygiene, three hours; *Osteology* (Human Anatomy, two hours; or Zoology, five hours); *Embryology* (Zoology, six hours; or the medical course in *Embryology,* for which, however, no credit is given toward the degree of Bachelor of Arts); *General Anatomy* (Human Anatomy, two hours; to be omitted, if Zoology is taken in second semester).

Second Semester: Hygiene, two hours; *Histology* (Zoology, five hours); *General Anatomy* (Human Anatomy, two hours; or in place of Human Anatomy, Zoology, six hours).

FOURTH YEAR

First Semester: Physiological Chemistry, five hours; Human Anatomy, two hours; *Practical Anatomy* (Human Anatomy, four hours); Physiology, five hours.

Second Semester: Physiological Chemistry, three hours; *Practical Anatomy* (Human Anatomy, four hours), five hours; Physiology, five hours.

EXAMINATIONS AND PROMOTIONS

At the end of each semester, examinations (written, oral, or both written and oral) are held on all subjects taught during the semester, and each student's grade is entered upon the record of the Faculty. Students *"conditioned"* cannot apply for another examination in the same subject until the close of the next course or semester, except that a student conditioned at the close of the college year may ask for another examination in the first two weeks of the following year. Students reported *"not passed"* are required to take the course over again before applying for another examination.

No student can be admitted in full standing to the senior class who has not passed all his work of the freshman and sophomore years.

REQUIREMENTS FOR GRADUATION

To be admitted to the degree of Doctor of Medicine, a student must be twenty-one years of age, and possess a good moral character. He must have completed the required course in laboratory work, and have passed satisfactory examinations on all the required studies included in the full course of instruction. He must have been engaged in the study of medicine for the period of four years, the last of which must have been in this college. He must have presented a thesis showing a satisfactory amout of original research along medical, or closely related scientific lines.

HOUSE PHYSICIANS

Two House Physicians to the University Hospital Homœopathic are appointed each year.

The appointments are made from among the members of the graduating class.

CLINICAL ASSISTANTS

Each member of the Faculty belonging to the clinical staff appoints each session a senior student to act as his clinical clerk, whose duty it is to conduct the reporting of all cases under treatment. The holding of one of these positions is found to be of very great practical utility to the student.

OTHER FACILITIES FOR INSTRUCTION

LIBRARY

The best idea of the magnitude of the University Library, which is made up of books upon general knowledge and those upon special subjects, including medicine, law, dentistry, literature, etc., can be obtained from the following statements taken from the University Librarian's report:

Total number of volumes, 212,020; number of volumes upon medical subjects, 18,208, of which over 3,000 are upon exclusively Homœopathic medicine. In the periodical room there are regularly taken 1,148 journals, 286 of which are medical, 45 being Homœopathic publications. A liberal annual appropriation is made by the Board of Regents for the purchase of books by the Homœopathic Faculty.

With the large collection of literature already accumulated and this appropriation, the library committee, Professor Dewey, is able to keep the library in fine work-

ing condition. The library building is one of the finest structures of the University. In it are housed the Medical libraries as well as the libraries of the other departments. The building is open from 8 A. M. to 10 P. M., Sundays excepted. Students are encouraged to do all the reading possible, and usually repair to the library when having cases to look up, or reports and papers to compile.

MUSEUMS

There are ample collections of plants, a botanical garden, photographs, models, specimens, preparations, apparatus, and instruments for illustrating the different studies embraced in the courses. Additions are made from time to time to these collections, so that the members of the Faculty are able to adopt every new method of illustration, and to exhibit to the classes each year all important improvements in the way of instruments and apparatus that are employed in the practice of medicine and surgery, and to show their application.

The following paragraphs may serve to indicate the extent of some of these collections.

MUSEUM OF ANATOMY

The museums of the late Professors FORD and SAGER, embracing several thousand specimens, the result of many years' labor in collecting and preparing materials intended to aid directly in teaching, are now the property of the University, and are used in the daily work of the class rooms. These museums contain a valuable collection of bones, illustrating healthy, as well as diseased, conditions, the various changes that occur from infancy to old age, and the processes of first and second dentition; dissections, general and partial, of the vascular, nervous, and muscular system, both normal and abnormal; models of various portions of the body in wax, papier-maché and plaster, illustrating morbid growths, skin diseases, etc.;

preparations in the comparative embryology, neurology, and craniology of the vertebrate; in human embryology; in the anatomy and pathology of the diseases of women, etc. The collection of monstrosities, both single and double, of man and of the lower animals, is one of the largest in the United States.

NATURAL HISTORY MUSEUM

Besides having access to the botanical, zoological and geological cabinets of the University, estimated to contain over 300,000 specimens, the Natural History Museum, occupying a fine building in the southwest corner of the campus, is open daily. This building is filled with specimens from all parts of the world, illustrating nearly every type of life. It contains also collections illustrative of man's handicraft through all stages of culture.

FACILITIES FOR PHYSICAL CULTURE

There are two magnificent gymnasiums upon the University campus; one the Waterman Gymnasium for men, the other the Barbour Gymnasium for women. Each is under the control of a physical director. The main floor of each is about 150 by 90 feet. They are well supplied with the various kinds of apparatus usually found in the best modern gymnasium. A number of smaller rooms are devoted to fencing, boxing and other special purposes, while the basements are given up to swimming pools, baths of various kinds, lockers, etc. The main halls are lighted in the daytime by means of a large sky-light 60 feet above the floor, and in the evening by electricity. In the Waterman Gymnasium a gallery makes room for an elliptical running track, 375 feet in length.

In the conduct of the gymnasiums the aim is not so much the development of a few gymnastic experts as the

provision of wholesome physical exercise for the many. Thus far the work has been voluntary. The facilities of the building, including physical examinations and instruction, are free to all students, the only charge being a rental of $2 a year for a locker.

Athletics.—A level field of thirty acres, owned by the University and situated a few minutes' walk southward from the campus, has been equipped for every kind of out-of-door sport. Here are the base ball grounds, the foot ball grounds, etc. The field is so laid out that a number of these games may be in progress at the same time and abundance of room left for all kinds of other exercises. On the campus there is a number of tennis courts.

The general supervision of athletic sports is vested in a committee of nine, consisting of five professors elected annually by the University Senate, and four students chosen by the Students' Athletic Association. The Board of Control thus constituted has charge of all matters involving the relation of athletic sports to the University; for example, the eligibility of players proposed for any University team, the arrangement of intercollegiate games, the granting of leave of absence, the investigation of charges of misconduct on the part of players. The policy of the Board is to foster the spirit of honor and gentlemanliness in athletics, to suppress evil tendencies, and to see to it that play shall not encroach too much upon the claims of work. For the furtherance of these ends certain specific rules and regulations have been adopted, a copy of which can be had on application to the Secretary of the University.

Other Facilities.—Students in the Homœopathic College have the privilege of attending the scientific and philosophical lectures collateral to medicine, given in the Department of Literature, Science, and the Arts.

AIDS TO MORAL AND RELIGIOUS CULTURE

The Students' Christian Association, which has a large membership, holds stated meetings for religious and for social improvement. Through the enterprising efforts of the Association and the benevolence of those interested in its aims, a spacious and beautiful building, called Newberry Hall, has been erected for its use opposite the University Campus. Another building for men, containing all the modern club features, is located a short distance from the campus. Both these buildings are managed by the Christian Association.

The churches of the city of Ann Arbor are cordially thrown open to the students, whose interests are largely consulted by the pastors in their pulpit instruction and in their plans of work. There are churches of the following communions in the city: Baptist, Congregationalist, the Disciples, German Lutheran, German Methodist, Methodist Episcopal, Presbyterian, Protestant Episcopal, Roman Catholic, and Unitarian.

Guilds, and other societies, consisting chiefly of students, have been organized in several of the churches, both for religious and moral culture and for social entertainment. The Hobart Guild, connected with St. Andrew's Church (Protestant Episcopal), has a commodious building, called Harris Hall, planned and equipped for the objects of the Guild; and two of the several lectureships contemplated in its plans have been endowed—the Baldwin Lectures for the Establishment and Defense of Christian Truth, and the Charlotte Wood Slocum Presbyterian Association owns the building known as McMillan Hall; it has a theological library of several thousand volumes, and maintains annual courses of lectures upon church history and church work. The Methodist Episcopal Church has organized the Wesleyan Guild, and has a permanent fund for the support of the Henry M.

Loud Lectureship; each college year five or six lectures on living topics are given by eminent men. Unity Club is a society formed by the Unitarian Church with similar purposes. The Foley Guild is an organization of Roman Catholic students under the patronage of the Rt. Reverend John S. Foley, bishop of the diocese. The society organized with the Church of the Disciples is called the Inland League. The Baptist Church has recently acquired a fine property and opened therein a commodious rendezvous for students.

UNIVERSITY ORGANIZATIONS

Lecture Association.—The Students' Lecture Association provides each year, at a low price for admission, an attractive series of lectures and musical entertainments.

Choral Union.—The Choral Union is an organization of students and others, for the study and practice of choral music under the direction of the Professor of Music in the University, and for the promotion of general musical culture. Under its auspices, and with the cooperation of the University Musical Society, a series of concerts is given each year, and in the spring the May Festival.

The Columbian Exposition Organ, which was purchased for the University and is now known as the Frieze Memorial Organ, in memory of the late Professor Henry Simmons Frieze, is used in this course of concerts.

Other Organizations.—Several Organizations of University officers and students are maintained for the reading of papers and the holding of conferences on topics of interest that do not fall within the scope of ordinary classroom work; and some of them also aim to secure each year speakers of prominence to give public addresses on subjects germain to the purpose of the organization.

The students of the Department of Law arrange annually for a celebration of Washington's birthday.

TRAINING SCHOOL FOR NURSES

In connection with the Hospital there is a training school for nurses under the charge of a competent and experienced principal. The term of study and service extends through three years, at the expiration of which time those who have reached the required standard are granted certificates of graduation, signed by the President and Secretary of the University.

Instruction in the theory and practice of modern nursing is given by a faculty of physicians and graduate nurses.

Applicants for admission must be of high character, good health, and have high school training. Since the duties devolving upon the trained nurse are often times arduous and exhausting, each applicant before being finally accepted, is required to undergo a thorough physical examination, the same as is required of applicants for life insurance.

The three years' training includes, besides the manual dexterity necessarily acquired, practical courses in hygiene, chemistry, physiology, bacteriology and electrotherapeutics. The nurses also receive courses of lectures upon medicine, toxicology, diseases of children, the different divisions of surgery, obstetrics, nervous and mental diseases, massage, practical dietetics, and the theory and practice of nursing.

For further information about the school, application may be made to the Dean of the Training School Faculty, Dr. ROYAL S. COPELAND.

THE UNIVERSITY HOMŒOPATHIC OBSERVER

There is issued from the College office a periodical edited under supervision of the Faculty, *The University Homœopathic Observer.* The Observer is a bulletin of the College, setting forth the work done by the Depart-

ment in such form as will interest the profession at large. There is always an abundance of material being produced in a well-equipped and well-conducted college and hospital that deserves permanent record. This periodical is intended to serve such purpose.

ALUMNI ASSOCIATION

The society meets annually on the day preceding the commencement exercises of the University. It is very desirable that every graduate of the College should enroll himself a member of the society. A cordial invitation is extended to every alumnus of the College to be present at the next meeting of the Association. The officers of the Association are: President, J. M. Lee, M.D., Rochester, N. Y.; Vice-President, E. A. Clark, M.D., Ann Arbor; Secretary, N. H. Chamberlain, M.D., Sonora, Tuolumme Co., Cal.; Treasurer, F. J. Peck, M.D., Ansonia, Conn.

FEES AND EXPENSES

Matriculation Fee.—For Michigan students, *ten dollars;* for all others, *twenty-five dollars.*

Annual Fee.—For Michigan Students, *forty-five dollars;* for all others, *fifty-five dollars.*

Diploma or Graduation Fee.—For all alike, *ten dollars.*

Laboratory Expenses.—In the laboratories, the fees for which are given in the following table, the student pays for the material used, and the expense varies somewhat with the care and economy practiced:—

LABORATORY FEES.

Anatomy	$20 00
Chemistry	15 00
Bacteriology	15 00
Physiological Chemistry	15 00
Histology	7 00
Pathology	10 00

The total amount of fees paid the University during the whole four years' course for matriculation, material used, incidental expenses and diploma, is, for Michigan students, about $285, and, for others, about $340, varying a little with the student's actual laboratory expenses.

The matriculation fee and the annual fee must be paid in advance. No portion of the fees can be refunded except by order of the Board of Regents, to students who leave the University during the academic year.

Other Expenses.—Students obtain board and lodging in private families for from three to five dollars a week. Clubs are also formed, in which the cost of board is from one dollar and a half to two dollars and a half a week. Room rent varies from seventy-five cents to two dollars a week for each student. There are no dormitories and no commons connected with the University. The University does not undertake to furnish manual labor to students; yet many find opportunities in the city for remunerative work, the Students' Christian Association being very helpful in this direction. Students on arriving in Ann Arbor can obtain information in regard to rooms and board by calling at the College office.

FURTHER PARTICULARS

Students arriving in Ann Arbor, and desiring further information, should apply at the office of the Faculty, in the Homœopathic College, North University Avenue. The office will be open daily during the latter part of September, and members of the Faculty, or some one who can give information, will be in attendance.

Letters of inquiry should be addressed to Dr. W. B. Hinsdale, Dean, or to Dr. Royal S. Copeland, Secretary.

ANN ARBOR

Frequent inquiries are made about the seat of the University. Ann Arbor is a typical university town, of over 20,000 inhabitants, county seat of Washtenaw County, and beautifully situated upon a stream of considerable size, the Huron River. The city is delightfully shaded and is bordered upon two sides by a new system of parks comprising some of the finest hill and river scenery in Michigan. The University is in the center of the resident part of the city and surrounded by pleasant shady avenues. The campus itself, is a large, beautiful and restful, though in session time a very busy, expanse of lawn and grove. Upon it is situated the greater number of the University buildings. Extensive improvements are going on and fine new buildings are being built all the time. Provisions have been made by the State Legislature that will soon lead people to speak of the "Greater University" and "Greater Ann Arbor." The distance from Detroit is 38 miles; from Toledo, Ohio, 48 miles; from Chicago, 256 miles.

FEATURES OF THE COLLEGE

I. It is a department of a University with the broadening influence derived from contact with students coming from every section of our country and pursuing different lines of study.

II. The scientific preliminary instruction is the most thorough in America.

III. The instruction in pure Homœopathic medicine and surgery is given by experts who devote almost their entire time to college duties and who come in personal contact with every student.

IV. The College has a fine new hospital with capacity of a hundred twenty-five beds, all for clinical work. Clinical and bed-side teaching is the main feature of the curriculum.

V. Clinical cases are sent to the hospital from every county in Michigan and from many adjoining states, thus affording a wide range and variety of material.

VI. Cases are assigned for daily treatment and other professional services to students who administer anæsthetics and assist at all operations.

VII. The medical library contains more volumes than are possessed by any other Homœopathic college.

VIII. Fees and expenses are lower than in larger cities.

IX. Public entertainments for the benefit of the University community are of high quality; the best musical and platform talent of the world coming to Ann Arbor.

X. The standard of qualification for admission is a guarantee that the quality of students is the best.

XI. A Summer School has been organized for the purpose of furnishing laboratory instruction to graduated physicians who wish to improve in exact clinical methods and perfect themselves in practical surgery and medicine. It also affords undergraduates opportunity to take up and work out special subjects.

STUDENTS

RESIDENT GRADUATES

NAME	RESIDENCE
Neil Isaac Bentley, M.D.	*Ann Arbor*
Arthur T. Bodle, M.D., *Chicago Homoeopathic Medical College*	*Bellaire*
Edgar Frank Chase, M.D., *Pulte Medical College*	*Ann Arbor*
Byron Defendorf, M.D., *Detroit Homoeopathic College*	*Fowlerville*
Silas W. Densmore, M.D., *Hahnemann Medical College and Hospital of Philadelphia*	*Sharpsburg, Pa.*
Leon J. Gibson, M.D.	*Vassar*
Milton P. Guy, M.D., *Chicago Homoeopathic College*	*Jackson*
Emma G. Halloway, M.D., *Hahnemann Medical College of Chicago*	*North Manchester, Ind.*
Guy C. Marsh, M.D., *Homoeopathic Hospital College, Cleveland*	*Galion, O.*
Frank Noyes, M.D., *Homoeopathic Hospital College, Cleveland*	*North Adams*
Warren Harvey Rand, M.D.	*Charlotte*
Archer Leroy Smethers, M.D.	*York, Pa.*

FOURTH YEAR STUDENTS

NAME	RESIDENCE
Hugh McDowell Beebe	*Sidney, O.*
Edward Bulger Chapman	*East Syracuse, N. Y.*
Ezra Lincoln Covey	*Homer*
James Arthur Elson	*Albion, N. Y.*
Rhoda Pamela Farquharson, A.B.	*Detroit*
Clarence Gillette	*Niles*
Mary Lorraine Jordan	*Wabash, Ind.*
Ethel May Knisely	*Barberton, O.*
Anna Bell Lefler	*Centralia, Ill.*
Charles Irving Newton	*Geneseo, N. Y.*
Elmer Ewell Owen	*Warsaw, N. Y.*
John Clarence Smith, A.B.	*Ann Arbor*
Griffith Edward Thomas	*Scranton, Pa.*
Charles Carroll Waggoner	*Corry, Pa.*
William Raymond Williamson	*Utica, N. Y.*
Oliver Bernard Zeinert	*Ballwin, Mo.*

THIRD YEAR STUDENTS

NAME	RESIDENCE
Charles Sherre Ballard	*Grand Rapids*
Charles Barton	*Toledo, O.*
Estel Thorton Becks	*Ann Arbor*
Eleanor Louise Campagnac	*Bassein, Burmah*
Ralph Emerson Case	*Pittsburg, Pa.*
Georgia Helen Jordan	*Wabash, Ind.*
Clarence Harvard Mead	*Mount Pleasant*
Zoena May Sutton	*Tonawanda, N. Y.*
Walter Earl Watkins	*Ann Arbor*
Rupert Kimmel Welliver	*Dayton, O.*
William Harold Wetmore	*Oswego, N. Y.*
Frank Wiedman	*Battle Creek*
Homer Smith Wilson, B S., *Grove City College*	*Grove City, Pa.*

SECOND YEAR STUDENTS

NAME	RESIDENCE
Irwin Henry Boesel	*New Bremen, O.*
Samuel Gordon Brooks	*Honeoye Falls, N. Y.*
Karl Bernard Brucker	*Lansing*
Floyd Hamilton Bussey	*Battle Creek*
Corwin Stanton Clarke	*Fairbury, Neb.*
John Redman Claypool	*Mount Vernon, O.*
Lawrence Love Dill	*Lucerne, Ind.*
Zina Leslie Gilding	*Ann Arbor*
James Burnham Griffin	*Detroit*
Willard Seth Hastings	*Fairmount, Ind.*
Loy Eugene Hoyt	*Chillicothe, O.*
Ralph Robertson Mellon, B.S., *Grove City College*	*Springdale, Pa.*
William Orville Merrill	*Mears*
Erwin Hare Mudge	*Buffalo, N. Y.*
Ernest Alfred Purnell	*Wheaton, Ill.*
Alice Mary Ridge	*Beresford, S. Dak.*
Ralph William Ridge	*Beresford, S. Dak.*
Perry Christian Robertson	*Lansing*
Henry Charles Senke	*Rochester, N. Y.*
Ansel Brooks Smith	*Ann Arbor*
Earl Amzie Stickle	*Newark, O.*
Allen Vincent Walker	*West Henrietta, N. Y.*
Clarence Howarth White	*Perry, N. Y.*
Theron Grover Yeomans	*Walworth, N. Y.*

FIRST YEAR STUDENTS

NAME	RESIDENCE
Thomas Bell	*Jellico, Tenn.*
Frank John Colgan	*Rochester Junction, N. Y.*
Ray Glenn DeVoist	*Ann Arbor*
Marion Helmuth Dinsmore	*Sharpsburg, Pa.*
Roy Odell Knapp	*Petoskey*
Louis Eichee Klingon	*Colchester, Conn.*
Mildred Lee	*Rochester, N. Y.*
Edward Alexander Miller	*Pittsburg, Pa.*
Ottie Leroy Morris	*Uniontown, Pa.*
Joseph Augustine O'Connor	*Rochester, N. Y.*
Harry Lawrence Parker	*Akron, N. Y.*
William Lewis Rhonehouse	*Maumee, O.*
Allen Donald Rowe	*Detroit*
Leo Frank Secrist	*Alpena*
Charles Howard Stocking	*Ann Arbor*
Fred William Watts	*Toledo, O.*
Gilbert Henry Welch	*East Syracuse, N. Y.*

SUMMER SCHOOL

THE DESCRIPTION AND SCOPE OF THE SUMMER SCHOOL IS PRESENTED SEPARATELY AS A SUPPLEMENT TO ACCOMMODATE THOSE WHO MAKE SPECIFIC INQUIRIES IN REGARD TO IT AND MAY NOT WISH TO PERUSE THE LARGER ANNOUNCEMENT

SUMMER SCHOOL COMMENCES JUNE 23, 1908,
AND CONTINUES FOUR WEEKS

Summer School

To comply with many requests of physicians that some special courses be given for their benefit during the summer months when a general practice can be left more easily, it has been decided to offer, the same as the other departments of the University, a Summer School Session. The object is to make the summer courses supplant the annual University Practitioners' Course that has been in very successful operation for ten years.

This special work, being given during the early summer, will afford opportunity for clinical and special study at a time of the year when the undergrdauates are upon vacation.

HOSPITAL

The entire hospital will be open to the attendants. Patients will be assigned as they arrive to members of the class desiring opportunity for clinical study. For example, when an operative case is received the one to whom it is assigned will take the clinical history upon blanks provided by the hospital for the purpose, keep the record, do the after-dressings, and be the actual assistant to the operator during the operation. In this way the Summer School student will have entire management of actual cases, in the absence of the head of the department, which he will be required to study from the diagnostic standpoint and to prepare for operation. The after-treatment, so important a point with the general practitioner, will be for him to conduct, assisted by the hospital nurses.

Beside the surgical features, there will be opportunity for the study of special medical subjects and illustrative cases. Classes can be organized for those desiring to give attention to gastro-intestinal diseases, diseases of infancy, affections of the organs of the chest, eye, ear, nose, throat, skin and genito-urinary organs. While all these subjects may not be considered during a single session, the wishes of those who attend will be considered and lectures, demonstrations and clinics provided accordingly. During the last weeks of June and the first weeks of July, the hospital wards and rooms are usually full and the clinical material sufficient for nearly all kinds of amphitheatre and bed-side work.

LABORATORY

It is essential that the physician understand the working methods of making chemical and microscopical examination of ordinary specimens. Some may never have had advantages, in their college days, for perfecting themselves in such detail; others may wish to revise their methods, or the physician who has just graduated may desire to do more practical work in a laboratory equipped especially for clinical examinations and under the direction of an expert. The laboratories of the University are known the country over, and the one in the Homœopathic Hospital is among the best of them.

Whoever he may be, the one who registers in this Summer School will find a practical series of laboratory demonstrations going on every day. The special subjects taught are examination of urine, blood examination, examination of stomach contents, sputum examination and the taking of opsonic indices. This laboratory instruction will be given during the morning hours, at least two hours daily being devoted to it by the Demonstrator. The laboratory will be open during the afternoon and

Saturdays for those who wish either more practice or further instruction.

The time allotted to these courses in the laboratory will be at least four weeks, or twenty days or forty hours. By putting in extra time the number of hours may be largely increased. Each one who attends is requested to bring his own microscope if he have one.

THE STAFF OF PRACTICAL ASSISTANTS

For operations the staff in the "pit" will be made up of those who are taking the courses. The positions on the staff will rotate in such a way as to give each one a chance in all places from anæsthetist to first assistant surgeon. This is the same method that is employed with the regular members of the senior class of the College and that has done more than any one thing to make the "Ann Arbor Clinics" notorious for thorough work upon the part of students who come hand to hand in actual contact with anæsthetics, blood, muscle, bone, nerve and all other tissues of the body that may require inspection, repair or removal. They also handle the instruments and see, and assist in, the application of each one to its intended use.

SPECIAL LECTURES

Arrangements are being made to have some gentlemen of reputation as medical teachers, from a distance, lecture and hold clinics; however the routine work will be conducted by the regular College Faculty.

It must be noted that special arrangements will be made in advance for each one who attends so that every thing will be ready to start in full operation from the first day. In order to carry out this plan, those who contemplate coming must enroll their names in advance, by mail.

SCHEDULE

While the detailed schedule can not be made out without consulting, somewhat, the wishes of the attendants upon the first day, the following is the general scheme:

Each day will be divided into five parts. Up to 9 A. M., there will be opportunity for attending cases in the wards and private rooms of the hospital. From 9 A. M. to 11 A. M. the instruction will be given in the clinical laboratory previously described. From 11 A. M. until noon will be lecture hour. Each afternoon will be devoted to clinics arranged somewhat as follows:

Monday, General Medicine; Tuesday, Eye, Ear, Nose and Throat; Wednesday, Gynæcology; Thursday, Diseases of Skin and Genito-urinary Diseases; Friday, General and Special Surgery.

OPPORTUNITIES FOR MEDICAL STUDENTS WHO WISH TO MAKE UP WORK OR TO TAKE SPECIAL COURSES

It is sometimes the case that a medical student desires to do some special work or make up work not conveniently available during regular college months. Those who wish to learn Physical Diagnosis, Dietetics or make studies of peculiar diseases as Tropical Diseases, Parasitic Diseases, Essential Diseases of the Blood, etc., can make up subjects by studious application in this Summer School.

LIBRARY FACILITIES

Reference is made to the University Library referred to in the announcement of the College. The library is open and all its opportunities are available to the Summer School students. It affords unexcelled opportunities for reading up special subjects.

TUITION

A fee of Fifteen Dollars will be charged each one who enrolls. An additional fee of Ten Dollars will be charged for work in the laboratory. The fees are payable the first day of the session. The first fee will admit to all courses except those taken in the laboratory. Whoever is interested in this Summer School is advised to correspond with CLAUDE A. BURRETT, M.D., Director of Laboratory, Homœopathic Hospital, Ann Arbor, Mich., with whom registrations will also be made.

The University Bulletin is Issued by the University of Michigan as Often as Once a Month During the University Year.

Entered as Second-Class Matter at the Postoffice at Ann Arbor, Michigan.

The Bulletin Includes the Following Publications:—

The Annual Report of the President.

The Calendar of the University.

The Annual Announcements of the Department of Literature, Science, and the Arts, the Graduate School, the Departments of Engineering, of Medicine and Surgery, and of Law, the School of Pharmacy, the Homœopathic Medical College, the College of Dental Surgery, and the Summer Session.

Other Announcements of the several departments of instruction, Reports of University Officers, etc.

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